Transformers and Inductors

HERMETICALLY SEALED TO CONFORM TO MIL-T-27B

DO-T★ AND DI-T★ TRANSISTOR TRANSFORMERS


DO-T


DI-T

Subminiature transistor transformers hermetically sealed to MIL-T-27B specifications. Leads are plastic insulated; withstand 10-lb. pull. Ideal for printed circuit use. High efficiency, low distortion and wide frequency range. Metal case. **Size:** $\frac{5}{16}$" dia. x $\frac{13}{32}$" lg., DO-T; $\frac{5}{16}$" dia. x $\frac{1}{4}$" lg., DI-T. U.S. Pat. No. 2,949,591; others pending.

UTC Type*	Net Each	††	Pri. Imped., Ohms. DC Ma	Sec. Imped., Ohms	UTC Type^	Net Each
DO-T1	$6.00	a	20K/30K, 0.5	800/1200	DI-T1	$6.00
DO-T2	5.40	b	500/600, 3	50/60	DI-T2	5.40
DO-T3	5.40	b	1K/1.2K, 3	50/60	DI-T3	5.40
DO-T4	5.40	b	600, 3	3.2	....	.....
DO-T5	5.40	b	1.2K, 2	3.2	DI-T5	5.40
DO-T6	6.00	b	10K, 1	3.2	....	.....
DO-T7	6.60	c	200K	1K	....	.....
DO-T8	4.80	d*	3.5 hys. @ 2	2.5 hys.‡‡	DI-T8	4.80
DO-T9	6.60	e	10K/12K, 1	500/600 CT	DI-T9	6.60
DO-T10	6.60	f	10K/12.5K, 1	1.2K–1.5K CT	DI-T10	6.60
DO-T11	6.60	f	10K/12.5K, 1	2K/2.5K CT	DI-T11	6.60
DO-T12	5.70	b	150/200 CT, 10	12/16	....	.....
DO-T13	5.70	b	300/400 CT, 7	12/16	....	.....
DO-T14	6.00	b	600/800 CT, 5	12/16	....	.....
DO-T15	6.00	b	800/1070 CT, 4	12/16	....	.....
DO-T16	6.00	b	1K/1330 CT, 3.5	12/16	....	.....
DO-T17	6.00	b	1.5K/2K CT, 3	12/16	....	.....
DO-T18	6.30	b	7.5K/10K CT, 1	12/16	....	.....
DO-T19	6.00	b	300 CT, 7	600	DI-T19	6.00
DO-T20	6.00	b	500 CT, 5.5	600	DI-T20	6.00
DO-T21	6.00	b	900 CT, 4	600	DI-T21	6.00
DO-T22	6.00	b	1500CT, 3	600	DI-T22	6.00
DO-T23	6.90	a	20K/30K CT,.5	0.8K/1.2K CT	DI-T23	6.90
DO-T24	7.50	c	200K CT	1K CT	....	.....
DO-T25	7.20	a	10K/12K CT, 1	1.5K/1.8K CT	DI-T25	7.20
DO-T26	5.70	d†	6 hys. @ 2	4.5 hys.‡‡	DI-T26	5.70
DO-T27	4.80	d‡	1.25 hys. @ 2	0.9 hy.‡‡	DI-T27	4.80
DO-T28	4.80	d§	0.3 hy. @ 4	0.1 hy.‡‡	DI-T28	4.80
DO-T29	5.70	b	120/150 CT, 10	3.2/4	....	.....
DO-T30	5.70	b	320/400 CT, 7	3.2/4	....	.....
DO-T31	6.00	b	640/800 CT, 5	3.2/4	....	.....
DO-T32	6.00	b	800/1K CT, 4	3.2/4	....	.....
DO-T33	6.00	b	1060/1330 CT,3.5	3.2/4	....	.....
DO-T34	6.00	b	1.6K/2K CT, 3	3.2/4	....	.....
DO-T35	6.30	b	8K/10K CT, 1	3.2/4	....	.....
DO-T36	7.50	a	10K/12K CT, 1	10K/12K CT	DI-T36	7.50
DO-T37	7.80	a	2K/2.5K CT, 3	8K/10K split	DI-T37	7.80
DO-T38	7.80	a	10K/12K CT, 1	2K/2.4K split	DI-T38	7.80
DO-T39	7.80	a	20K/30K CT, .5	1K/1.5K split	....	.....
DO-T40	8.40	a	40K/50K CT, .25	400/500 split	....	.....
DO-T41	7.50	a	400/500 CT, 8/6	400/500 split	DI-T41	7.50
DO-T42	7.50	a	400/500 CT, 8/6	120/150 split	....	.....
DO-T43	7.50	a	400/500 CT, 8/6	40/50 split	DI-T43	7.50
DO-T44	7.50	a	80/100 CT, 12/10	32/40 split	DI-T44	7.50
DO-T45	7.80	a	1K/1.25K CT,3.5	16K/20K split	....	.....
DO-T46	8.40	c■	100K CT	500 CT	....	.....
DO-T47	8.10	a■	9K/10K, 1	9K/10K CT	....	.....
DO-T48	7.80	a■	8K/10K, 1	1.2K/1.5K CT	....	.....
DO-T49	7.80	d#	Series, .075 hy at 10 ma, 10.5 ohms; Par., .018 hy at 20 ma, 2.6 ohms		....	.....
DO-T50	5.70	d#	Series, 20 hy at 1 ma, 5.1K ohms; Par., 5 hy at 2 ma, 1275 ohms		....	.....
DO-T51	7.80	a	2K/2.5K CT, 3	2K/2.5K split	DI-T51	7.80
DO-T52	7.80	a■	4K/5K CT, 2	8K/10K CT	DI-T52	7.80
DO-T400	6.60	h	28 v., 380–1 kc	6.3 v., 60 maꟷ	....	.....
DO-T410	7.80	h	28 v., 380–1 kc	Two 6.3 v., 30 ma	....	.....
DO-T420	7.80	h■	28 v., 380–1 kc	28 v., 10 ma	....	.....
DO-TSH	.90		High mu shield and cover; 25 db		DI-TSH	.90

*560 ohms. †2100 ohms. ‡100 ohms. §25 ohms. #2 windings. ††Application; **a**—Interstage. **b**—Output. **c**—Input. **d**—Inductor. **e**—Driver or output. **f**—Driver. **g**—Matching. **h**—Power unit. ‡‡**DI-T**—Primary impedance. •Wt., 1/10 oz. ^Wt., 1/20 oz. ■With electrostatic shield. ꟷReplaces old No. DO-T500.

PIL★ ULTRAMINIATURE AUDIO INDUCTORS

Smallest audio inductor available. Incorporating the DO-T and DI-T construction, these units are reliable, metal encased, ruggedized and hermetically sealed to MIL-T-27B. All inductors are subjected to a 500 volts dielectric strength test instead of 100 volts, for higher safety and reliability. Size: $\frac{5}{16}$" dia. x $\frac{5}{16}$" h. Wt., 1/20 oz. U.S. Pat. No. 2,949,591; others pending.

UTC Type	Connection	Ind. Hys. Min. at 1 V., 1 Kc	DC Ma	DCR Ohms	Net Each
PIL-5	Series	.12	0	43	$6.00
	Parallel	.03	0	10.7	
	Series	.10	10	....	
	Parallel	.025	10	....	
PIL-8	Series	.32	0	115	6.00
	Parallel	.08	0	28	
	Series	.16	10	....	
	Parallel	.06	10	....	
PIL-12	Series	.8	0	300	6.00
	Parallel	.2	0	75	
	Series	.4	5	....	
	Parallel	.15	5	....	

NEW DI-T200★ TRANSISTOR TRANSFORMERS

Rugged, reliable construction uses the same unique winding techniques and physical construction found in DO-T and DI-T transformers (see listing at left). Specially designed for printed circuit applications, units come with straight pin 1" long, .016" d. Dumet wire, gold-plated leads. Hermetically sealed to MIL-T-27B. Size: $\frac{5}{16}$" dia. x $\frac{3}{8}$" h. Wt., 1/15 oz. U.S. Pat. No. 2,949,591; others pending.

UTC Type	Application	Impedance, Ohms Primary	Secondary	Net Each
DI-T225	Interstage	80/100 CT	32/40 split	$8.40
DI-T230	Outp./match	300 CT	600 CT	7.20
DI-T235	Interstage	400/500 CT	40/50 split	8.40
DI-T240*	Inter./outp.	400/500 CT	400/500 split	8.40
DI-T245	Outp./match	500/600 CT	50/60 CT	6.90
DI-T250	Oupt./mixing	500 CT	600 CT	7.20
DI-T255	Outp./match	1K/1.2K CT	50/60 CT	6.90
DI-T260	Output	1500 CT	600 CT	7.20
DI-T265	Isol./inter.	2K/2.5K CT	8K/10K split	8.70
DI-T270	Outp./driver	10K/12K CT	500/600 CT	7.80
DI-T273	Outp./driver	10K/12.5K CT	1.2K/1.5K CT	7.80
DI-T276	Inter./driver	10K/12K CT	2K/2.4K CT	7.80
DI-T278	Inter./driver	10K/12.5K CT	2K/2.5K split	8.70
DI-T283	Isol./inter.	10K/12K CT	10K/12K CT	8.40
DI-T288	Inter./driver	20K/30K CT	800/1.2K CT	8.10
DI-T204	Split inductor: 0.1 hy–4 ma, 25 ohms, series; .025 hy–8 ma, 6 ohms, parallel			6.00
DI-T208	Split inductor: 0.9 hy–2 ma, 105 ohms, series; 0.2 hy–4 ma, 26 ohms, parallel			6.00
DI-T212	Split inductor: 2.5 hy–2 ma, 630 ohms, series; 0.6 hy–4 ma, 157 ohms, parallel			6.00
DI-T216	Split inductor: 4.5 hy–2 ma, 2.3K ohms, series; 1.1 hy–4 ma, 575 ohms, parallel			6.90
DI-T200SH	Drawn Hipermalloy shield provides 15 to 20 db shielding through side of case			.75

*Ratio, 2:1:1.

TUBE, TRANSISTOR FILTER INDUCTORS

The multiple ratings applied to "H" series of filter chokes and are also applicable to these units. Transistor supply units are swinging type to increase regulation. Terminals for H-79 are opposite mounting. Metal cased **TF4** Type, H-70 thru H-79, H-170 and H-171. Lightweight molded type **MIL TF5SX04ZZ**, H-105 thru H-109. Type H-79 case, 7" x 7" x 8".


TF4


MIL F5SX04ZZ

UTC Type	Ind. at DC Hys.	Ma	Res. Ohms	Max. VDC* Chk. Inp.	Test VRMS	MIL Case	Net Each
H-70	20	20	925	350	1000	AH	$ 7.20
H-71	20	40	350	500	2500	FB	8.40
H-72	13	70	215	500	2500	GB	9.00
H-73	11	100	150	700	2500	HB	11.40
H-74	11	150	135	700	2500	JB	12.90
H-75	11	200	90	700	2500	KB	17.40
H-76	11	200	85	1500	4500	LB	24.00
H-77	10	300	60	2000	5500	MB	27.00
H-78	7	400	48	2500	7000	OA	34.50
H-79	7	800	20	3000	9000	.....	90.00
H-164§	45‡	35	1.2	....	500	AG	6.60
#	11.25‡	70	.295				
H-166§	125‡	50	1.2	....	500	AH	7.50
#	31‡	100	.3				
H-168§	68‡	100	.8	....	750	AJ	8.40
#	17‡	200	.2				
H-170†	180‡	125	.6	....	1000	GB	10.20
#	45‡	250	.15				
H-171†	9‡	.75 a.	.03	....	1000	JA	15.00
#	2.25‡	1.25 a.	.0075				
H-172†	70‡	.25 a.	.22	....	1000	HA	12.60
#	17.5‡	.5 a.	.055				
H-173†	80‡	.5 a.	.15	....	1000	KA	21.00
#	20‡	1 a.	.038				
H-174†	50‡	.65 a.	.08	....	1000	MB	30.00
#	12.5‡	1.3 a.	.02				

UTC Type	Ind. at DC Hys.	Ma	DC Res. Ohms	Test Volts	Size, Inches L.	W.	H.	Wt., Lbs.	Net Each
H-105	2.5	25	225	1000	1 1/4	15/16	15/16	.1	$ 5.70
H-106	2.25	60	110	1000	1 5/8	1 5/16	1 3/8	.28	6.00
H-107	2	120	55	2500	2 1/8	1 3/4	1 55/64	.9	7.50
H-108	2	220	35	2500	2 7/8	2 1/2	2 17/32	1.7	9.60
H-109§	.2	150	.6	750	2 7/8	2 1/2	2 17/32	1.7	10.80
#	.055	250	.15						
H-300§	1	5	40	500	1	3/4	23/32	.5	6.30
#	.25	10	10						

*To ripple voltage in input circuit only. †Two Windings ‡In mh. §Two windings, split in series and parallel. #Two windings, split in parallel.

★UTC TRADEMARK. ALL PRODUCT LINES OR TYPE DESIGNATIONS ARE UTC TRADEMARKS. SPECIFY BY TRADEMARKS TO ASSURE UTC HIGH QUALITY AND RELIABILITY.

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 One Purchase Order to Us Will Save You Time, Money and Paper Work

Hermetic Components

HERMETICALLY SEALED TO CONFORM TO MIL-T-27B

TRANSISTOR SUPPLY TRANSFORMERS

Transistor supply transformers with primary 115 v. AC, 50/60 cps (tapped on H-143 thru H-146 for dual secondary voltages). DC ratings are approximate and are based on silicon bridge rectifier (except H-141, H-142 also shown F.W. CT.). Choke input v. DC is based on 10% voltage drop in choke. Condenser value, C(*), is in 1000 μf. H-141, H-142, H-147 under secondaries in parallel is single winding. MIL type TF4RX02.

UTC Type	Sec. Volts RMS	Sec. Amps RMS	Secondary in Parallel: Choke Inp. DCV	Choke Inp. DCA	Cond. Inp. DCV	Cond. Inp. DCA	C*	Secondary in Series: Choke Inp. DCV	Choke Inp. DCA	Cond. Inp. DCV	Cond. Inp. DCA	C*	MIL Case	Net Each
H-141	20 CT	.3	16.5	.3	26	.2	.2	.....	....	......	....	...	EB	$10.20
			8	.43	12	.3	.5	.....	....	......	....	...		
H-142	20 CT	.6	16.5	.6	26	.4	.4	.....	....	......	....	...	EA	12.90
			9	.85	13	.6	1	.....	....	......	....	...		
H-143	17/21.5	1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA	18.60
	17/21.5	1.5												
H-144	17/21.5	4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA	30.00
	17/21.5	4												
H-145	17/21.5	9	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6	4	RC-175	45.90
	17/21.5	9												
H-146	34/43	4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	RC-175	45.90
	34/43	4.5												
H-147	10	20	8.2	20	10	13	12	.....	....	......	....	...	KA	27.00

UNIV. TRANSISTOR SUPPLY TRANSFORMERS

UTC universal transistor supply transformers are ideal for use in low voltage DC supplies, telephone supplies, bias voltage supplies, battery chargers and plating rectifiers. Highly reliable units are encased in MIL cases, similar to TF4 type illus. above. Primary taps can modify nominal AC voltages by −6%, +6% and ±12%. Capacitor following rectifier affects the DC voltage. All units TF4RX02.

50/60-CYCLE TYPES

Primary 115 v. AC, 50/60 cps. Nom. secondary, 8.25–40.5 v. except H-965, 16.5–81 volts nom.

UTC Type	MIL DC Range Volts	MIL DC Range Amps	Indus. DC Range Volts	Indus. DC Range Amps	MIL Case	Net Each
H-915	6–53	.065–.02	6–53	.085–.025	AH	$11.70
H-925	6–53	.22–.07	6–53	.28–.085	AJ	12.90
H-935	6–53	1.2–.4	6–53	1.52–.48	FA	14.40
H-94	6–53	3–1	6–53	3.8–1.2	HA	19.80
H-95	6–53	7.5–2.5	6–53	9–3	KA	28.80
H-96	6–53	18–6	6–53	23–7.5	OA	48.00
H-965	12–106	1.5–.5	12–106	1.9–.6	HA	20.40

NEW 400-CYCLE MET★ TYPES

Primary 115 v., 400 cps. Nom. sec., 8.25–40.5 v.

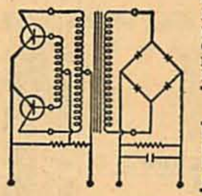
MET455	6–53	1.2–.4	6–53	1.52–.48	AJ	$12.90
MET465	6–53	3–1	6–53	3.8–1.2	FA	14.40
MET475	6–53	7.5–2.5	6–53	9–3	HA	20.40

400-CYCLE MOLDED TYPES

Primary, 105/115 v., 380-1,000 cps. Secondary, 6.3 v. CT; 2,500 v. rms test. Molded type TF5SX01ZZ is illustrated.

UTC Type	Sec. Amps	Size, Inches L.	W.	H.	Wt., Lbs.	Net Each
H-101	3.5	1 25/32	1 21/32	2	.3	$14.10
H-102	5.5	1 3/4	2	2 1/4	.44	15.00
H-103	10	2 5/16	2 1/8	2 1/2	.8	17.40
H-104	25	2 7/8	2 1/2	3 1/32	1.5	21.90
H-118	.3	3/4	1	21/32	.05	9.00

TRANSISTOR INVERTER TRANSFORMERS



Supply high voltage DC. Layer insulated. Drawn MIL case. Circuit details are supplied. With 6 v. DC input instead of 12 v., output voltage is halved, current rating remains the same. For 12/14 or 24/48 v. DC battery.

UTC Type	DC Output Volts	DC Ma	MIL Case	Net Each
H-97	250	60	AH	$14.70
H-98	375	100	AJ	15.90
H-99	425	175	FA	20.40
H-100	550	200	GB	21.00

TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS

Hermetically sealed units for transistor or filament supply use. **Primary:** 105/115/210/220 v. AC, 50/60 cps, except types H-119, H-130, H-137, H-138 (115 v. AC) and H-131 (115/220 volts). Suited to 400/100 cycle service. **Size:** H-128, H-129; 6½" x 5½" x 7¾" h. Weight, H-128, 34 lbs.; H-129, 28 lbs. All ratings are MIL-T-27B except **Amps** (Industrial) ratings.

METAL CASED TF4RX01 TYPE

UTC Type	MIL Type	Sec. Volts	Amps MIL	Amps Indus.	Test• VRMS	MIL Case	Net Each
H-119	TF4RX01AH	6.3CT	.3	.38	1500	AH	$ 8.40
H-120	TF4RX01GB	2.5	10	12	4000	GB	13.80
H-121	TF4RX01JB	2.5	10	12	10000	JB	18.00
H-122	TF4RX01KB	2.5	20	26	10000	KB	21.00
H-123	TF4RX01NB	2.5	5	7.5	10000	NB	36.00
		2.5	5	7.5			
		2.5	10	15			
H-124	TF4RX01FB	5	3	3.8	2000	FB	12.00
H-125	TF4RX01KB	5	10	12	10000	KB	21.00
H-126	TF4RX01LA	5	20	25	10000	LA	27.00
H-127	TF4RX01NA*	5	20	30	21000	NA	45.00
H-128	TF4RX01YY*	5	60	75	21000	....	81.00
H-129	TF4RX01YY*	5	10	12	21000	....	90.00
		5	10	12			
		5	20	24			
H-130	TF4RX01AJ	6.3CT	.6	.75	1500	AJ	9.00
H-131	TF4RX01FB	6.3CT	2	2.5	2500	FB	12.00
H-132	TF4RX01JA	6.3CT	6	7	2500	JA	19.20
		6.3CT	6	7			
H-133	TF4RX01HB	6.3CT	7	8	2500	HB	15.00
H-134	TF4RX01HA	6.3CT	10	12	2500	HA	16.80
H-135	TF4RX01JB	10CT	10	13	2500	JB	21.00
H-136	TF4RX01LA	14, 12, 11CT	10	14	2500	LA	27.00
H-137	TF4RX01EB	6.3	.6	.75	1500	EB	12.00
		6.3	.6	.75			
H-138	TF4RX01GA	12.6	2	2.5	1500	GA	19.50
		12.6	2	2.5			

NEW MET★ 400-CYCLE SERIES

MET-410♯	TF4SX01YY 400 cy. pri.	6.3	.6	.75	500	RC-25	$ 7.80
MET-420	TF4SX01AH 380–1000 cy.‡	6.3CT	2	2.5	1500	AH	9.60
MET-430†	TF4SX01FA 400 cycles§	12.6CT 12.6	2 2	2.5 2.5	1500	FA	18.00
MET-435	TF4SX01FA 380–1000 cy.‡	6.3CT	10	12	2500	FA	12.00
MET-440	TF4SX01GB 380–1000 cy.‡	6.3CT 6.3CT	6 6	7 7	2500	GB	15.00

*Term. opposite mtg. †Two MET-430's, Scott-connected, provide 26 v., 2-phase from 115 v., 3-phase 400 cps input. Replaces former No. H-139. ‡105/115/125 v. primary. §57.5/99.7/115 v. primary. ♯Replaces former No. H-140. •Secondary.

NEW PIP★ SERIES TRANSISTOR PULSE TRANSFORMERS TO MIL-T-20138B

Subminiature transistor-type pulse transformers are designed to give a maximum of component density in equipments. The configuration is especially compatible with transistors. Using the basic design of the UTC DO-T* and DI-T* series, units achieve exceptional reliability. Ratio 4:4:1, checked and adjusted in a transistor test circuit to give the required pulse width. Hermetically sealed, manufactured and guaranteed to MIL-T-21038B by full environmental testing. All units are completely metal cased, MIL type TP6RX4410CZ. All units individually adjusted to parameters shown in table below. Size: 5/16" dia. x 5/16" h. Weight, 1/20 oz. U.S. Pat. No. 2,949,591; others pending.

UTC No.	Approx. DC Ohms 1-2	3-4	5-6	Blocking Osc. Pulse: •Width μsec.	Rise Time	*	†	‡	Coupling Circuit Characteristics: •Width μsec.	Volts Out	Rise Time	*	†	‡	Imp., Ohms§	Net Each
PIP-1	.18	.20	.07	.05	.02	0	0	37	.05	9	.018	0	0	12	50	$ 6.00
PIP-2	.47	.56	.17	.1	.025	0	0	25	.1	8	.02	0	0	5	50	6.00
PIP-3	1.01	1.25	.37	.2	.030	2	0	15	.2	7	.035	0	0	5	100	6.00
PIP-4	1.5	1.85	.54	.5	.05	0	0	15	.5	7	.06	0	0	0	100	6.00
PIP-5	2.45	3.1	.9	1	.08	0	0	14	1	6.8	.15	0	0	5	100	6.00
PIP-6	3.0	3.7	1.1	2	.10	0	0	15	2	6.6	.18	0	2	10	100	6.00
PIP-7	4.9	6.05	1.8	3	.20	0	0	14	3	6.8	.20	0	2	10	100	6.00
PIP-8	8.0	9.7	2.9	5	.30	0	0	3	5	7.9	.22	0	13	25	200	6.00
PIP-9	13.1	15.9	4.7	10	.35	0	5	12	10	6.5	.4	0	15	20	200	6.00
PIP-10♯	.55	.41	.15	.1	.01	0	0	20	.1	8	.01	0	0	5	140/50	6.00
PIP-11♯	2.9	2.2	.82	1	.02	4	4	6	1	6.6	.05	0	6	12	280/100	6.00
PIP-12♯	9.4	7.1	2.6	5	.05	0	12	12	5	8	.09	2	12	25	560/200	6.00
PIP-100	Transistor pulse transformer kit consists of 1 each PIP-1 through PIP-9 in plastic case															51.00
PIP-SH	Drawn Hipermalloy shield and cover for PIP's provides 20 to 30 db shielding															.90

*% overshoot. †Droop, %. ‡% backswing. •Pulse. §In and out. ♯Ratio 5:3:1, MIL type TP6RX5310CZ.

★UTC trademark. SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY SPECIFICATIONS

HERMETICALLY SEALED TO CONFORM TO MIL-T-27B

HERMETIC SEALED POWER/PLATE TRANSFORMERS


Power transformers, primary 115 v., 60 cps suited to 50-1000 cps service (for 50 cps, sec. current ratings reduced by 10%). Plate transformers, primary, 105/115/210/220 v. AC, 50/60 cps. "L" ratings are choke input and "C" ratings are condenser input. H-80 thru H-198 MIL Type TF4RX03; H-110 thru H-117, MIL Type TF4RX02. Tapped high voltage winding provides either of two secondary voltages for the utmost versatility. DC voltages are indicated for both choke and condenser input filters, as well as for military and industrial applications. Suffix **W** indicates unit designed for full wave center tap and full wave bridge use; center tap of secondary may be disconnected from ground.

UTC Type	*	Sec. VCT	MIL-T-27B Approx. VDC	MIL-T-27B Approx. DC Ma	MIL-T-27B Fil. Amps†	Industrial Approx. VDC	Industrial Approx. DC Ma	Industrial Fil. Amps†	MIL Case	Net Each
H-80	C	450	240	30	2*	215	38	2.5*	FA	$ 12.90
H-81	L	500	170	95		160	110			18.00
	C		270	55	3*	245	75	3*	HA	
	L	550	200	85	2♯	180	105	2♯		
	C		310	50		280	65			
H-82	L	550	180	145		160	190			20.40
	C		290	90	4*	270	115	4.5*	JB	
	L	600	215	135	2♯	190	180	2♯		
	C		330	85		315	100			
H-83	L	600	215	165		200	210			21.00
	C		315	100	5	320	120	6	JA	
	L	670	250	150	2♯	230	200	2♯		
	C		400	90		380	110			
H-84	L	700	245	225	5	240	255	6		26.40
	C		390	135	1	375	160	1.5	KA	
	L	750	275	205	3♯	270	230	4♯		
	C		430	125		410	150			
H-85	L	700	245	300	6	230	370	6		30.00
	C		390	190	1.5	355	230	2	LA	
	L	750	270	280	3♯	250	350	4♯		
	C		425	170		395	210			
H-86	L	720	270	310	6	250	360	7.5		30.90
	C		425	180	2	395	225	2	MB	
	L	790	295	300	3♯	280	350	4♯		
	C		475	160		440	210			
H-87	L	730	245	420	6	230	515	6		36.00
	C		390	275	2	390	300	2	NB	
	L	800	275	400	4♯	275	480	6♯		
	C		440	250		430	290			
H-89	L	850	305	430	8	275	550	10		49.50
	C		460	280	4	445	340	5	OA	
	L	1050	400	400	6♯	370	500	6♯		
	C		600	260		575	320			
H-91	L	900	340	200	5	330	220	6		27.00
	L	1000	390	190	1	385	195	1.5	KA	
					3♯			4♯		
H-92	L	900	340	265	6	330	310	8		33.00
	L	1050	400	240	2	395	290	2	MB	
					4♯			4♯		
H-93	L	1000	370	300	8	340	390	10		49.00
	L	1200	465	265	4	455	350	5	OA	
					6♯			6♯		
H-194§	L	200	170	140		160	155			21.00
	C		275	85	3.5	260	95	4	HA	
	L	235	200	125		190	135			
	C		325	75		310	85			
H-195§	L	215	185	285		175	300			24.00
	C		300	180	5	285	195	6	JA	
	L	265	230	240		220	255			
	C		375	150		360	165			
H-196§	L	230	200	445		190	480			30.00
	C		320	280	5*	300	300	6	KA	
	L	285	250	380	1.5	240	420	2		
	C		400	235		380	260			
H-197§	L	260	230	500		220	550			42.00
	C		360	320	6	340	350	7	MB	
	L	320	280	420	2	270	470	2		
	C		450	260		430	290			
H-198‡	..	800	1000	5	1.25 v.—.2 a. connected to one end of HV winding. 6.3 v.—.6 a. 5.2 kv rms test voltage.				HA	27.00
	..	1600	2000	5						
	..	2400	3000	5						
H-110	L	1050	365	300	......	....	400	......	MB	27.00
	L	1200	430	275			385			
H110W	L	1050	730	210	......	....	280	......	MB	29.70
	L	1200	850	190			265			
H-111	L	1050	415	500	......	....	600	......	NA	33.00
	L	1200	480	450			550			
H111W	L	1050	830	350	......	....	420	......	NA	36.00
	L	1200	960	310			380			
H-112	L	1500	615	320	......	....	385	......	NA	36.00
	L	1900	790	275			330			
H112W	L	1500	1230	220	......	....	270	......	NA	39.60
	L	1900	1580	190			230			
H-113	L	2500	1050	310	......	....	375	......	•	54.00
	L	3000	1275	275			330			
H-114	L	2500	1050	475	......	....	525	......	▲	81.00
	L	3000	1265	425			475			
H-115	L	3500	1500	275	......	....	375	......	▲	81.00
	L	4400	1900	235			320			
H-117	L	5000	2125	950	......	....	1150	......	■	291.00
	L	6000	2550	850			1050			

HERMETIC AUDIO UNITS


RC-50


RC-25


SM


FH

Proven to MIL-T-27B, these compact units have response and level ratings similar to Ouncers for RC-25 case; Ultra compact units for RC-50 case; to SSO units for SM case. **RC-25 Types:** 1 13/32" x 61/64" x 1 7/16" h. (Wt., 1.5 oz.). **RC-50 Types:** 1 5/8" x 1 5/8" x 2 5/16" h. (Wt., 8 oz.). **SM Types:** 11/16" x 1 1/2" x 29/32" h. (Wt., 0.8 oz.). **FH Types:** 7/8" x 23/32" x 9/16" h. (Wt., 0.8 oz.).

Type	Application	Pri. Ohms	Sec. Ohms	♦	Net
H-1	Line to grid	50, 200 CT, 500 CT	50K	a	$ 9.00
H-2	Mike to grid	82, 50 ma	135K	a	9.90
H-3	Pl. to grid	15K	60K	a	7.80
H-4	Pl. to grid	15K, 4 ma	60K	a	7.80
H-5	Pl. to p-p	15K	95K CT	a	8.40
H-6	Pl. to p-p	15K, 4 ma	95K split	a	10.20
H-7	Pl. to line	20K CT, 4 ma	150/600 split	a	9.60
H-8	Mixing	150/600 split	600 CT	a	9.00
H-9	Input	150/600 split	1 meg.	a	9.00
H-10	Pl. to grid	10K	1 meg.	a	8.40
H-11	Inductor: 300 hys, 50 hys @ 3 ma, 600 ohms			a	7.50
H-12	Line to p-p	Same as H-1	50K CT	a	9.60
H-13	Interstage	10K/2.5K split	2K/.5K split	a	9.00
H-14	Interstage	10K/2.5K split	4K/1K split	a	9.00
H-15	Tr. to line	1.5K CT, 8 ma	500/125 split	a	9.00
H-16	Tr. to V.C.	2K/4K CT, 4 ma	8/16	a	9.00
H-17	Tr. input	600/150 split	2K/500 split	a	8.70
H-18	Tr. interstage	10K CT, 4 ma	500/125 split	a	8.70
H-19A	Input‡‡	250 CT/500 CT	50K/100K CT	b	16.50
H-20	Interstage	15K split	80K split	b	15.00
H-21	Pl. to p-p	15K, 8 ma	80K split	b	18.00
H-219	Tr. interstage	50K CT, 2 ma	500/125 split	a	9.00
H-22	Pl. to line	15K, 8 ma	50/200, 125/500	b	15.90
H-220	Tr. interstage	500/125 split	500/125 split	a	8.70
H-221	Tr. interstage	500/125 split	150/37.5 split	a	8.70
H-222	Split inductor: 60 mh–80 ma, 4 ohms, series; 15 mh–160 ma, 1 ohm, parallel			a	6.00
H-224	Split inductor: 1 hy–20 ma, 60 ohms, series; 0.25 hy–40 ma, 15 ohms, parallel			a	6.00
H-225	Tr. interstage	100/25 split	40/10 split	a	8.70
H-23	P-p to line	30K split	Same as H-22	b	16.20
H-24	Inductor: 250 hys. @ 5 maɪ, 65 hys. @ 10 ma⁞			b	10.80
H-25	Mixing	500 CT	125/500	b	15.00
H-26	Interstage	10K/2.5K split	2K/500 split	b	15.00
H-27	Tr. to V.C.	500 CT	16/4 split	b	15.00
H-280	Interstage	200 CT	400/100 split	b	12.00
H-281	Tr. to V.C.**	48 CT	16, 8, 4	b	12.00
H-282	Tr. to V.C.††	20 CT	16, 8, 4	b	12.60
H-283	Mixing/ matching	50, 125/150, 200/250, 333 500/600	Same as Primary	b	17.40
H-284	Split inductor: 4 hy–50 ma, 100 ohms, series; 1 hy–100 ma, 25 ohms, parallel			b	7.20
H-286	Split inductor: 40 hy–15 ma, 1K ohms, series; 10 hy–30 ma, 250 ohms, parallel			b	7.50
H-290	Shld. chopper	2500 e. s.	100K	b	19.80
H-291	Max. shld. chop.	2000/500 e. s.	312K	c	28.80
H-295	Shld. chopper	10K/2.5K e.s.	50K	f	18.00
H-30	Input	50	62,500	d	8.40
H-31	Pl. to grid	10K	90K	d	8.40
H-32	Pl. to line	10K, 3 ma	200	d	8.40
H-33	Output	30K, 1 ma	50	d	8.40
H-35	Inductor: 100 hys., 50 hys. @ 1 ma, 4400 ohms			d	6.90
H-36	Interstage	25K, 0.5 ma	1K	d	7.50
H-37A	Tr. output	500 CT, 3.5 ma	50	d	7.50
H-38	Interstage	10K CT, 2 ma	1.2K CT	d	7.50
H-39	Interstage	10K CT, 2 ma	2K CT	d	7.50
H-40A	Tr. output	500 CT, 10 ma	600 CT	d	7.50
H-41A	Tr. output	1500 CT, 7 ma	600 CT	d	7.50
H-42A	Isol./Tr. intstge.	10K CT, 1 ma	10K CT	d	8.40
FHA15	Tr. interstage	10K CT/2.5K split	200 CT/50 split	e	8.10
FHA25	Tr. interstage	20K CT/5K spl.	800 CT/200 spl.	e	8.10
FHI-3	Split inductor: 60 mh–32 ma, 6 ohms, series; 15 mh–64 ma, 1.5 ohms, parallel			e	6.00
FHI-7	Split inductor: 1 hy–8 ma, 100 ohms, series; 0.25 hy–16 ma, 25 ohms, parallel			e	6.00
FHI11	Split inductor: 2.4 hy–2 ma, 160 ohms, series; 0.6 hy–4 ma, 40 ohms, parallel			e	6.00

*Choke (L), or Condenser (C) input. †All filament windings are 6.3 volts, unless otherwise specified. ‡Highly shielded scope transformer. Secondary not CT. ♯5 v. filament winding. §DC ratings for bridge rectifier circuits. •6" x 5 1/8" x 6 3/4". ▲6 3/4" x 6 1/2" x 8". ■11" x 11" x 14 3/4". *Center tapped. ‡‡Has 75 db shielding. ɪ6000 ohms. ⁞1500 ohms. **5 watts. ††10 watts. ♦Case: **a**—RC-25. **b**—RC-50. **c**—RC-62. **d**—SM. **e**—FH. **f**—RC-37, 1 3/8" sq. x 1 5/8" h.

FOR "H" SERIES TRANSISTOR AND TUBE FILTER INDUCTORS, SEE PREVIOUS UTC PAGE

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

Hermetic Components

MAT★ MAGNETIC AMPLIFIERS TO MIL-T-27B FOR SERVO MOTOR APPLICATIONS

VACUUM TUBE TYPE

Exceptionally stable magnetic amplifiers. MAT-1 to MAT-4 units are designed for control of 2-phase, 115 v., 400 cps servo motors. Units meet MIL-T-27B and MIL-E-5400 specifications and are hermetically sealed against extreme environmental conditions in addition to being compact and magnetically shielded. Output is sinusoidal, amplitude variable and phase reversible. Dual-triode such as a 12AU7 operating with a plate voltage of 115 volts, 400 cps or higher provides control. Signal to triode grids can be polarity reversible DC or phase reversible 400 cps with or without suppressed carrier modulation. DC power requirements are eliminated by these units as well as temperature sensitive dry-disc rectifiers. The high input impedance provides minimum loading on sensing elements along with high power gain for maximum performance. Ringing at low load level is reduced to a minimum through high internal damping factors. Power output ratings are conservative and power gain of the magnetic structure is approx. 40; response time approx. 7.5 msecs.; max. null volts, 3 v. rms. For a single phase supply voltage the load capacitor should effect 90° shift with motor load, for 3-phase, 30° shift. MIL type TF4SY40YY unless otherwise noted.

MAT-1 THRU MAT-4

UTC Type★	MAT-1	MAT-2	MAT-3	MAT-4
230 Volt Supply				
Power output	4 w.	8 w.	11 w.	18 w.
RL, Ohms	3300	1600	1200	720
CL, µf	.2	.3	.5	.7
115 Volt Supply				
Power Output	2 w.	4 w.	6 w.	9 w.
RL, Ohms	6500	3300	2200	1450
CL, µf	.13	.2	.3	.45
Reson. Freq.	40 cyc.	35 cyc.	35 cyc.	20 cyc.
Log-Decr.	.18	.23	.03	.65
Cont. Wdg. Res.	6200 ohms	8450 ohms	4750 ohms	5650 ohms
Case, Length, In.	1 1/4	1 1/2	1 3/4	2 1/8
Width, In.	1 15/16	2 1/8	2 1/2	3 1/8
Height, In.	2 5/16	2 3/4	2 15/16	3 3/8
Mtg. Ctrs., In.	13/16 x 1 1/2	1 x 1 5/8	1 1/8 x 1 7/8	1 1/2 x 2 1/2
Studs, Stainless	4-40	6-32	8-32	8-32
Cutout, In.	1	1	1	1
Weight, Lbs.	.67	1.1	1.7	2.75
Net Each	**$27.00**	**$30.00**	**$36.00**	**$39.00**

UTC Type MAT-5—115 v., 400 cps to 460 v. CT provides 230 v. at 48 ma DC or 460 v. at 24 ma DC. RC-37 case. MIL type TF4-SY02YY. Net Each.............................. **$10.80**

UTC Type MAT-6—Input, 10K ohms primary, 1:15 CT ratio. Phase shift under 1°. Case, RC-25. MIL Type TF4RX10YY. Net Each.............................. **$9.00**

TRANSISTOR TYPE

Transistor MAT-7 thru MAT-65 units, identical to vacuum tube types but are designed for low impedance control applications. Input transformer may be selected by impedance ratio rather than exact rated impedance. MAT-7 through MAT-11 are 400-cycle types; MAT-60 and MAT-65, 60 cycles.

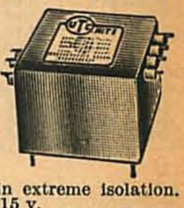
UTC Type★	MAT-7	MAT-8	MAT-9	MAT-10
Power Output	4 w.	8 w.	11 w.	18 w.
RL, Ohms	3300	1600	1200	720
CL, µf	.2	.3	.5	.7
Cont. Wind. Res.	38 ohms	52 ohms	30 ohms	36 ohms
Case Length, In.	2 5/16	2 1/2	2 3/4	2 29/32
Width, In.	1 13/16	2 1/4	2 1/2	2 29/32
Height, In.	1 17/32	1 11/16	2	2 1/4
Mtg. Ctrs , In.	1 3/8 x 1 7/8	1 13/16 x 2	1 15/16 x 2 3/16	2 3/8 x 2 3/8
Studs, Stainless	4-40	6-32	8-32	8-32
Cutout, In.	1	1	1	1
Weight, Lbs.	.65	1.1	1.7	2.75
Net Each	**$25.80**	**$28.80**	**$34.50**	**$37.50**

UTC Type MAT-11—115 v. 400 cps to two 28 v., 0.2 amp windings for 56 v. CT, .2 amp, or 28 v., .4 amp. Case, RC-37. MIL Type TF4SY02YY. Net Each.............................. **$10.50**

UTC Type MAT-60—60-cycle type. Power output, 50 watts. Load resis., 260 ohms. Load cap., .7 µf, approx. Cont. wind. resis., 50 ohms. MIL type TF4SX40MB. Net Each.......... **$54.00**

UTC Type MAT-65—115 volt, 60 cps to 8.5 v. CT at 500 ma and 63 v. CT at 300 ma. Case, FA. MIL Type TF4SX02FA. Net Each.............................. **$12.60**

ULTRA-SHIELDED POWER LINE ISOLATION TRANSFORMERS



Provides extreme isolation from power line, similar to battery operation, for use in critical circuitry requiring the utmost in isolation. Powers equipment from the power line which could be operated previously only by battery power. Effective capacity coupling between primary and secondary windings is less than 0.1 µµf. For this purpose, shields are individually terminated, allowing maximum flexibility of connection. Input and output terminals are brought out on opposite sides of the case (special housing), in order to maintain extreme isolation. Primary 115 v. AC, 50/60 cps. Secondary, 115 v.

UTC Type	Power, Watts MIL-T-27B	Power, Watts Indust.	Case Size, Inches	Net Each
HIT-1	50	60	4 1/32 x 4 1/32 x 3 1/32	$33.00
HIT-15	120	150	5 11/32 x 5 x 3 1/2	39.00
HIT-2	160	200	5 17/32 x 5 17/32 x 4 17/32	48.00
HIT-3	400	480	8 x 6 17/32 x 5 11/32	69.00
HIT-4	1000	1200	9 x 7 1/2 x 7 1/2	120.00
HIT-450*	80	100	4 1/32 x 4 1/32 x 3 1/32	33.00

*Primary, 115 v. 400 cps. Secondary, 115 volts.

PRECISION MINIATURE WIDE-APPLICATION PULSE TRANSFORMERS TO MIL-T-20138B

ALL UNITS INDIVIDUALLY ADJUSTED TO PARAMETERS SHOWN IN TABLES

Reliable, hermetically sealed to withstand service in a temperature range −70° C to +130° C. Wound-core construction provides temperature stability. Designs are of the high inductance type, providing minimum droop and assuring true pulse width. Ratios, 1:1:1, types H-45 through H-57, MIL type TP7SX1110; ratio 4:4:1, types H-60 through H-68, MIL type TP7SX4410AZ; ratio 5:3:1, all others, MIL type TP7SX5310.

TRANSISTOR PULSE TRANSFORMERS

Size and weight of Types H-60 thru H-671 are same as Type H-45 in Vacuum Tube Transformer table.

TYPICAL

UTC Type	Approx. DCR Ohms 1-2	3-4	5-6	Blocking Osc. Pulse •Width µsec.	Rise Time	*	†	‡	Coupling Circuit Characteristics •Width µsec.	Volts Out	Rise Time	*	†	‡	Imp. Ohms§	Net Each
H-60	.124	.14	.05	.05	.016	0	0	30	.05	9.3	.012	0	0	20	50	$ 6.60
H-61	.41	.48	.19	.1	.016	0	0	30	.1	8.2	.021	0	0	15	50	6.60
H-62	.78	.94	.33	.2	.022	0	0	18	.2	7.4	.034	0	5	12	100	6.60
H-63	1.86	2.26	.70	.5	.027	2	10	20	.5	7.5	.045	0	20	25	100	6.60
H-64	3.73	4.4	1.33	1	.033	0	12	25	1	7	.078	0	15	23	100	6.60
H-65	6.2	7.3	2.22	2	.066	0	15	25	2	6.6	.14	0	10	20	100	7.50
H-66	10.2	12	3.6	3	.087	0	18	30	3	6.8	.17	0	10	20	100	7.50
H-67	14.5	17.5	5.14	5	.097	0	23	28	5	7.9	.2	0	18	28	200	7.50
H-68	42.3	52.1	14.8	10	.14	0	15	28	10	6.5	.4	0	15	30	200	7.50
H611	.426	.32	.132	.1	.018	8	0	12	.1	8.2	.02	0	0	30	▲	6.60
H641	5	3.6	1.4	1	.04	0	10	10	1	7	.07	0	20	30	■	6.60
H671	21	16	6	5	.08	0	14	12	5	8	.2	0	25	30	♦	7.50
H-69	Transistor pulse transformer kit, H-60 thru H-68 in plastic case.															60.00

VACUUM TUBE PULSE TRANSFORMERS

UTC Type	Approx. DCR Ohms 1-2	3-4	5-6	Blkg. Osc. Pulse •Width µsec.	Rise Time	*	†	‡	Coupling Circuit Characteristics •Width µsec.	Volts Out	Rise Time	*	†	‡	Imp. Ohms§	Size Inches L.	W.	Wt. Grams	Net Each
H-45	3	3.5	4	.05	.022	0	20	10	.05	17	.01	20	0	35	250	3/8	3/8	1	$6.75
H-46	5.5	6.5	7	.10	.024	0	25	10	.10	19	.01	30	10	50	250	3/8	3/8	1	6.75
H-47	3.7	4.0	4	.20	.026	0	25	8	.20	18	.01	30	15	65	500	9/16	9/16	4	6.00
H-48	5.5	5.8	6	.50	.03	0	20	5	.50	20	.01	30	20	65	500	9/16	9/16	4	6.00
H-49	8	8.5	9	1	.04	0	20	10	1	24	.02	15	15	65	500	9/16	9/16	4	6.00
H-50	20	21	22	2	.05	0	20	10	2	27	.05	10	15	35	500	9/16	9/16	4	6.00
H-51	28	31	33	3	.10	1	20	8	3	26	.07	10	10	35	500	9/16	9/16	4	6.00
H-52	36	41	44	5	.13	1	25	8	5	23	.15	10	10	45	1000	9/16	9/16	4	6.00
H-53	37	44	49	7	.28	0	25	8	7	24	.20	10	10	50	1000	5/8	5/8	6	6.00
H-54	50	58	67	10	.30	0	20	8	10	24	.25	10	10	50	1000	5/8	5/8	6	6.30
H-55	78	96	112	16	.75	0	20	10	16	23	.40	5	15	20	1000	5/8	5/8	6	6.30
H-56	93	116	138	20	1.25	0	25	10	20	23	.6	5	10	10	1000	5/8	5/8	6	6.30
H-57	104	135	165	25	2.0	0	30	10	25	24	1.5	5	10	10	1000	5/8	5/8	6	6.30
H461	9.6	6.4	2.5	.1	.025	0	0	8	.1	19	.02	3	5	20	I	3/8	3/8	1	6.75
H501	30	20	7	2	.08	0	12	5	2	27	.06	12	15	35	‡	9/16	9/16	4	6.00
H531	66	47	17	7	.32	0	12	3	7	24	.23	12	10	40	**	5/8	5/8	6	6.00
H561	180	142	53	20	1.75	0	13	5	20	23	.7	5	10	10	**	5/8	5/8	6	6.30
H-58	Pulse transformer kit, consists of 1 each of H-45 through H-57 in partitioned plastic case.																		75.00

*% overshoot. †Droop, %. ‡% backswing. §In and out. •Pulse ▲140/50. ■280/100. ♦560/200. I700/250. ‡1400/500. **2800/1000.

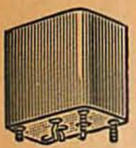
★UTC trademark. All product lines or type designations are UTC trademarks.

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

FILTERS, DECADES AND CIRCUIT DEVELOPMENT TRANSFORMERS

ELECTRIC WAVE FILTERS HERMETICALLY SEALED TO CONFORM TO MIL-F-18327B

INTERSTAGE AND LINE FILTERS



Hermetically sealed to MIL-F-18327B in compact, shielded case. **Frequency:** Indicated by stock number, in cps; example, HMI-200 has 200 cps cut-off. **Size:** 1 3/16" x 1 11/16" x 1 5/8" h. (Wt., 6 oz.) except BMI-30, BMI-50, all HMI's, LMI-100 and all LML's are 2 1/2" h. (Wt., 9 oz.) **BMI Types:** Bandpass interstage; operate between tube plate (or 10K ohms) and a grid. Provide gain of 2 at center frequency. **BML Types:** Same, but 500/600 ohms input and gain of 9. **BTI Types:** 10K ohms input and output. **HMI Types:** High pass interstage units. **LMI Types:** Low pass interstage. **HML Types:** High pass with input and output 500/600 ohms. **LML Types:** Low pass with input and output 500/600 ohms. **LLP-10:** Low frequency, 10 cps, low pass; loss more than 40 db at 20 cps; source and load 100K ohms; size, 2 1/16" x 2 5/16" x 3 1/8" (Wt., 1 1/2 lbs.).

UTC Type	Net Ea.	UTC Type	Net Ea.	UTC Type	Net Ea.
BMI-30	$36.00	LMI-100	$31.50	HMI-500	$31.50
BMI-50	30.00	LMI-200	31.50	HMI-800	31.50
BMI-60	30.00	LMI-400	31.50	HMI-1000	31.50
BMI-90	30.00	LMI-500	31.50	HMI-2000	31.50
BMI-100	30.00	LMI-800	31.50	HMI-3000	31.50
BMI-120	30.00	LMI-1000	31.50	BML-400	30.00
BMI-150	30.00	LMI-1500	31.50	BML-1000	30.00
BMI-200	30.00	LMI-2000	31.50	HML-200	39.00
BMI-240	30.00	LMI-2500	31.50	HML-300	39.00
BMI-300	30.00	LMI-3000	31.50	HML-500	39.00
BMI-400	30.00	LMI-4000	31.50	HML-1000	39.00
BMI-500	30.00	LMI-5000	31.50	LML-1000	31.50
BMI-750	30.00	LMI-10000	31.50	LML-1500	31.50
BMI-800	30.00	BTI-60	36.00	LML-2000	31.50
BMI-1000	30.00	BTI-100	36.00	LML-2500	31.50
BMI-1500	30.00	BTI-120	36.00	LML-3000	31.50
BMI-2000	30.00	HMI-50	31.50	LML-4000	31.50
BMI-3000	30.00	HMI-100	31.50	LML-8000	31.50
BMI-4000	30.00	HMI-200	31.50	LML-10000	31.50
BMI-5000	30.00	HMI-300	31.50	LML-12000	31.50
BMI-10000	30.00	HMI-400	31.50	LLP-10	60.00

MINIFILTERS★

BPM

Provide almost identical operational characteristics as standard units. Extremely miniaturized. Hermetically sealed to MIL-F-18327B. Cutoff frequency indicated by number suffix (in cps). **Size:** BPH, BPM and LPM-6000 (and up), 3/4" x 3/4" x 1 1/8" h. (Wt., 1 oz.). HPM and LPM (thru 5000), 1" x 1" x 1 3/8" h. (Wt., 2 1/4 oz.). **BPM Types:** Bandpass with gain 2:1. Attenuation, approx. 2 db, ±3% from center freq.; 35 db/octave. Input, 10K ohms. Output to grid tapped for 10K ohms in transistor circuitry. Used with tubes, continuity is on grid side; with transistors, continuity is on input side. **BPH Types:** Bandpass units; attenuation less than 3 db ±5% from center freq.; 40 db/octave. Source and load 500 ohms. **HPM Types:** High pass; down less than 6 db at cutoff freq.; more than 30 db at .67 cutoff; 40 db at .6 cutoff. Input and output, 10K ohms. **LPM Types:** Low pass units. Down less than 6 db at cutoff freq.; more than 30 db at 1.5 cutoff; 40 db at 1.65 cutoff. Input and output 10K ohms.

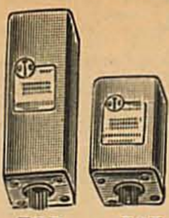
UTC Type	Net Ea.	UTC Type	Net Ea.	UTC Type	Net Ea.
BPH-50000	$27.00	BPM-2500	$27.00	HPM-4000	$30.00
BPH-100000	27.00	BPM-3000	27.00	LPM-200	30.00
BPM-400	27.00	BPM-3200	27.00	LPM-300	30.00
BPM-440	27.00	BPM-4000	27.00	LPM-500	30.00
BPM-500	27.00	BPM-4800	27.00	LPM-1000	30.00
BPM-600	27.00	BPM-5000	27.00	LPM-1500	30.00
BPM-750	27.00	BPM-6000	27.00	LPM-2000	30.00
BPM-800	27.00	BPM-6400	27.00	LPM-3000	30.00
BPM-1000	27.00	BPM-8000	27.00	LPM-5000	30.00
BPM-1200	27.00	BPM-10000	27.00	LPM-6000	30.00
BPM-1500	27.00	BPM-20000	27.00	LPM-8000	30.00
BPM-1600	27.00	HPM-500	30.00	LPM-10000	30.00
BPM-1800	27.00	HPM-1000	30.00	LPM-15000	30.00
BPM-2000	27.00	HPM-1500	30.00		

PRECISION INDUCTANCE DECADES

Instruments for use in design and experimental work with tuned circuits, wave filters, etc. Low hum pickup toroid coils employ a permalloy dust core, which combined with special winding offer high Q and stability. Lab adjusted inductance tolerance of 1%. **Size:** 4 1/2" l. x 4 3/8" w. x 2 3/8" h. Weight, 2 lbs. Case is DI Type.

UTC Type	Induct. Hys.	Optimum Range	Max. Q	Max. AC Ma	Ins. Test VRMS	Net Each
DI-1	10 x .01	2–60 kc	200	500	500	$42.00
DI-2	10 x.1	.25–20 kc	200	150	500	54.00
DI-3	10 x 1	.25–10 kc	200	50	500	57.00
DI-4	10 x 10	.2–1.5 kc	100	15	500	72.00

TELEGRAPH TONE CHANNEL FILTERS



TGR TGT

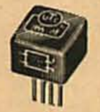
Bandpass filters for multiplex transmitting and receiving. Units utilize a 7-terminal header, matching a 7-pin subminiature tube socket. **TGR** (receiving) and **TGT** (transmitting) filters are 600 ohms input and output. Down less than 3 db at ±42.5 cps from center freq. **TGR** units down more than 30 db at ±170 cps. Attenuation, greater than 15 db at adjacent channel crossover. **TGT** units down more than 16 db at ±170 cps. Attenuation, greater than 7.5 db at adjacent channel crossover. All units MIL Type FR4RX22YY. **TGT Size:** 1 1/2" x 1 1/2" x 2 1/2". Weight, 8 oz. Mtg. screws, 6-32. **TGR Size:** 1 1/2" x 1 1/2" x 4 1/4". Weight, 15 oz. Mtg. screws, 6-32.

UTC Type TGT-*	Net Each	UTC Type TGT-*	Net Each	UTC Type TGR-*	Net Each	UTC Type TGR-*	Net Each
425	$42.00	1955	$33.00	425	$72.00	1955	$60.00
595	42.00	2125	33.00	595	72.00	2125	60.00
765	42.00	2295	33.00	765	72.00	2295	60.00
935	42.00	2465	30.00	935	72.00	2465	57.00
1105	36.00	2635	30.00	1105	63.00	2635	57.00
1275	36.00	2805	30.00	1275	63.00	2805	57.00
1445	36.00	2975	30.00	1445	63.00	2975	57.00
1615	36.00	3145	30.00	1615	63.00	3145	57.00
1785	33.00	3315	30.00	1785	60.00	3315	57.00

*Numerical suffix in UTC Type column is center freq. in cps.

TELEMETERING BAND PASS FILTERS

A



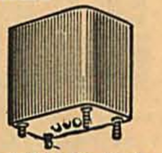
B

Both TMN and TMW types, designed for 100K ohms input and output impedance, with insertion loss of less than 6 db. Four-pin hermetically sealed header matches small Winchester socket. **TMN Types (Fig. A):** Down less than 3 db at ±7.5% of center freq.; down more than 18 db at ±25% of center freq. Attenuation greater than 40 db beyond 1.75 and .58 center freq. **TMW Types: (Fig. A):** Down less than 3 db at ±15% of center frequency; down more than 20 db at ±50% of center frequency. Attenuation, greater than 40 db beyond 2.5 and .4 center frequency. **MNF and MWF Types (Fig. B):** (Minifilter) Provide same performance as TMN and TMW types except are extremely miniaturized for use in transistor circuitry. Pin terminals make use with printed circuits practical. **Size:** TMN-.4 thru -1.7, 11/16" x 1 9/32" x 2"h. Weight, 3.5 oz. TMN-2.3 thru TMW-70, 23/32" x 23/32" x 1 3/8" h. Weight, 1.2 oz. MNF-.4 thru -5.4 (Minifilter), 1 3/16" x 1 3/16" x 1/2" h. Weight, 1 oz. MNF-7.35 thru MWF-70, 23/32" x 23/32" x 1/2" h. Weight, 1/3 oz.

UTC Type	UTC Type	Freq. Kc*	Net Each	UTC Type	UTC Type	Freq. Kc*	Net Each
TMN-	MNF-	.4	$39.00	TMN-	MNF-	14.5	$42.00
TMN-	MNF-	.56	39.00	TMN-	MNF-	22	42.00
TMN-	MNF-	.73	39.00	TMN-	MNF-	30	42.00
TMN-	MNF-	.96	39.00	TMN-	MNF-	40	42.00
TMN-	MNF-	1.3	39.00	TMN-	MNF-	52.5	42.00
TMN-	MNF-	1.7	39.00	TMN-	MNF-	70	42.00
TMN-	MNF-	2.3	39.00	TMW-	MWF-	22†	42.00
TMN-	MNF-	3.0	39.00	TMW-	MWF-	30†	42.00
TMN-	MNF-	3.9	39.00	TMW-	MWF-	40†	42.00
TMN-	MNF-	5.4	39.00	TMW-	MWF-	52.5†	42.00
TMN-	MNF-	7.35	39.00	TMW-	MWF-	70†	42.00
TMN-	MNF-	10.5	42.00				

*To order, add prefix according to type preferred (UTC Type), to frequency, i.e., TMN-.4, where .4 is freq. in Kc. †±15% bandwidth, all others ±7.5%.

NEW 400-CYCLE 115 V. LINE FILTERS

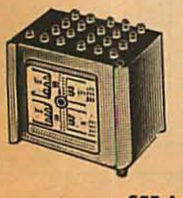


Intended for use on 115 v., 400 cps line to eliminate harmonic distortion.

UTC No. PLF-25—Gives 150 v. output into 500 ohm load within ±1 db, 375–425 cps. Will attenuate 800 cycles by 30 db; 1200 cycles and higher by at least 50 db. MIL type FR4RX-11NB. Meets MIL-F-18327B. Size, 4 5/16" w. x 5 1/16" d. x 5 1/2" h. Weight, 10 lbs. Net..**$66.00**

UTC No. PLP-13—Eliminates harmonic distortion, rejects 60 and 120 cycles, and gives zero phase shift at 400 cycles. Operating into 1000 ohm load, provides 115 v. output at 400 cycles, within ±1 db, 375–425 cycles. Attenuates 800 cycles by 15 db; 1200 cps by 45 db; above 1200 cps by at least 35 db; 120 cps by 20 db; and, 60 cps by 30 db. MIL type FR4RX22LB; meets MIL-F-18327B specifications. Size, 3 11/16" w. x 4 5/16" d. x 4 1/2" h. Weight, 6 1/2 lbs. Net..**$66.00**

LAB★ CIRCUIT DEVELOPMENT TRANSISTOR TRANSFORMERS



Aid the designer in selecting optimum impedances for best power and distortion results from his transistor circuit.

UTC Type LAB-10—20 cycles to 20 kc, up to 1 watt continuous. Primary Impedance: 1900 to 14,400 ohms with 20:1 or 10:1 ratio to secondary; 925 to 7600 ohms with 10:1 or 5:1 ratio to secondary. Secondary Impedance: 19 to 36 ohms, and 37 to 76 ohms. Size, 3 1/8" x 2 5/8" x 3 1/4". Weight, 3 lbs.
Net Each....................**$30.00**

UTC Type LAB-20—20 cycles to 20 kc, up to 50 watts, continuous. Primary Impedance: 6, 12, 24, 40, 54, 70 and 96 ohms. Secondary Impedance: 4, 8, 16 and 64 ohms. Size, 5 13/16" x 5" x 4 11/16". Wt., 15 lbs. Net Each..................................**$60.00**

UTC Type LAB-5—20 cycles to 20 kc, up to 50 mw, continuous. Humbucking balanced core and windings. High electrostatic shielding; multiple magnetic shielding. Primary Impedance: 125, 200 split, 500 split and 2000 split ohms. Secondary Impedance: Same as primary. Size, 3 3/8" x 2 5/8" x 3 1/4". Wt., 3 lbs.
Net Each..................................**$48.00**

★UTC trademark.
All product lines or type designations are UTC trademarks.

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

High "Q" Coils and Inductors

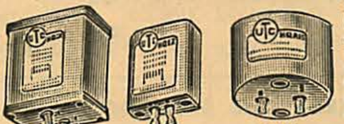
MINIDUCTORS★

MH, MM ML

Ultraminiature high Q units hermetically sealed to MIL-T-27B, Grade 5; ideal for transistor and printed circuit use. ML types are in hipermalloy shield case; others are molded permalloy dust toroids. Excellent temperature stability: 1%, −55° C to +100° C. Pin terminals. **Type MM:** Ultra-miniature, epoxy molded, toroidal inductors. Max. Q at 30 kc. Size, 7/16" dia. x 1/4". Wt., 0.7 oz. **Type MH:** Same, but max. Q at 100 kc. **Type ML:** Ultra-miniature, hypermalloy cased inductors. Max. Q at 800–2,000 cps, depending on inductance. Size, 7/16" x 31/64" x 9/16". Wt., 0.2 oz. **Type MO:** Miniature, molded type. Max. Q at 600–1500 cps, depending on inductance. Size, 3/4" x 1 1/16" x 13/16". Wt., 1 oz. **Type MW:** Miniature, toroidal, epoxy molded. Max. Q, 5–10 kc. Size, 23/32" dia. x 13/32". Wt., 0.25 oz.

UTC Type	Ind., Hys. (0 DC)	Net Each	UTC Type	Ind., Hys. (0 DC)	Net Each	UTC Type	Ind., Hys. (0 DC)	Net Each
ML-0	.15	$8.40	MM-6	.030	$8.10	MO-2	2	$ 6.60
ML-1	.25	8.40	MM-7	.060	8.40	MO-5	5	6.60
ML-2	.40	8.40	MM-8	.120	8.40	MO-7.5	7.5	6.60
ML-3	.70	8.40	MH-1	.0006	8.10	MO-20	20	6.60
ML-4	1.4	8.40	MH-2	.0015	8.10	MO-50	50	7.20
ML-5	2.5	8.40	MH-3	.0025	8.40	MO-100	100	7.20
ML-6	4.0	8.40	MH-4	.006	8.40	MW-.05	.05	7.20
ML-7	6.0	8.40	MH-5	.010	8.70	MW-.10	.10	7.50
ML-8	10	8.40	MH-6	.015	8.70	MW-.25	.25	7.50
ML-9	25	8.70	MH-7	.025	9.00	MW-.5	.5	7.80
ML-10	60	9.90	MH-8	.040	9.00	MW-.75	.75	8.40
MM-1	.003	7.50	MO-.1	.1	6.30	MW-1	1.0	8.70
MM-2	.005	7.50	MO-.15	.15	6.30	MW-1.2	1.2	9.30
MM-3	.008	7.80	MO-.3	.3	6.30	MW-2	2	10.80
MM-4	.0125	7.80	MO-.5	.5	6.30	MW-3	3	11.70
MM-5	.020	8.10	MO-1	1	6.30	MW-5	5	13.50

HIGH "Q" TORIOD INDUCTORS



HQB HQE HQA and HQC

Excelled only by the "M" series toroids. "HQ" coils are available for applications requiring coils for use in circuitry from 100 cps to 100 kc. Coils are adjusted to 1% and inductance is independent of frequency, temperature and vibration. Voltage stability is high and the shielding case assures coupling attenuation of 80 db. All units are hermetically sealed to meet MIL-T-27B specifications under severe environmental conditions. All units are MIL Type TF4RX-20YY. **Size:** HQA, HQC case, 1 13/16" dia. x 1 3/16" h.; HBQ case, 2 5/8" l. x 1 5/8" w. x 2 5/8" h.; HQE case, 1 1/16" l. x 1/2" w. x 1 7/32" h. Mounting screws 6-32 except HQE case, 4-40. **Cutout Size:** HQA, HQC cases, 9/16" x 1 3/16"; HBQ case, 9/16" x 1 1/8"; HQE case, 5/16" x 1/2". Weight, HQA, HQC cases, 5 oz.; HBQ case, 14 oz.: HQE case, 1.5 oz.

*Millihenries.

UTC Type	Induct. (0 DC*)	Max. DC Ma	Net Each	UTC Type	Induct. (0 DC*)	Max. DC Ma	Net Each
HQA-1	5	400	$ 7.50	HQB-3	70	170	$15.90
HQA-2	12.5	260	7.80	HQB-4	120	120	16.80
HQA-3	20	200	8.10	HQB-5	.5 hy.	60	17.40
HQA-4	30	160	8.40	HQB-6	1 hy.	41	18.00
HQA-5	50	130	8.70	HQB-7	2 hy.	30	18.90
HQA-6	80	100	9.00	HQB-8	3.5 hy.	22	19.80
HQA-7	125	85	9.00	HQB-9	7.5 hy.	16	21.00
HQA-8	200	65	9.60	HQB-10	12 hy.	11	21.90
HQA-9	300	50	9.60	HQB-11	18 hy.	9	22.80
HQA-10	.5 hy.	40	9.90	HQB-12	25 hy.	8	24.00
HQA-11	.75 hy.	35	9.90	HQC-1	1	1350	15.60
HQA-12	1.25 hy.	26	10.80	HQC-2	2.5	850	16.80
HQA-13	2 hy.	20	11.40	HQC-3	5	600	18.00
HQA-14	3 hy.	16	12.90	HQC-4	10	420	19.80
HQA-15	5 hy.	13	13.80	HQC-5	20	300	24.00
HQA-16	7.5 hy.	10	15.00	HQE-1	5	155	7.80
HQA-17	10 hy.	9	15.90	HQE-2	10	110	7.80
HQA-18	15 hy.	8	16.80	HQE-3	50	50	8.10
HQB-1	10	410	15.00	HQE-4	100	35	8.40
HQB-2	30	240	15.30	HQE-5	200	25	8.70

LOW FREQUENCY HIGH "Q" COILS

TYPE MQL

Hermetically sealed to MIL-T-27B specifications, all units are MIL Type TF4RX20YY. Inductance values are lab. adjusted to 2% tolerance at 1 v., 60 cps. Total inductance swing is less than 3.5% from −55° C to +85° C. Two windings brought to four terminals permit series, parallel, center-tapped, or transformer type connections. Case, 1 13/16" dia. x 2 1/2" h. Square mounting, 1 1/2" x 1 1/2", 6-32 screw. Cutout, 1 1/2" dia. Weight, 1 lb.

UTC Type	Hys. (0 DC) Series	Hys. (0 DC) Parallel	Net Each	UTC Type	Hys. (0 DC) Series	Hys. (0 DC) Parallel	Net Each
MQL-0	1	.25	$30.00	MQL-3	200	50	$30.00
MQL-1	10	2.5	30.00	MQL-4	400	100	31.50
MQL-2	20	5	30.00	MQL-5	2500	625	33.00

TYPE MQM

Similar to above, MQM types provide exceptional stability. Inductance variation less than 2%, −55° C to +130° C. MIL type TF4SX20YY. Case, 1 5/16" dia. x 1 5/8" h. Cutout, 1" dia. Wt., 5 oz.

MQM-2	2	.5	$12.60	MQM-300	300	75	$13.50
MQM-16	16	4	12.60	MQM-600	600	150	13.50
MQM-40	40	10	12.60				

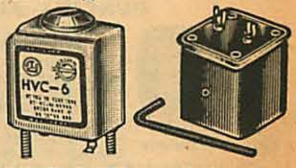
HERMETIC "M" TYPE TOROIDS

Permalloy dust toroids provide maximum Q. Hermetically sealed to MIL-T-27B and laboratory adjusted to 1% tolerance; excellent voltage and temperature stability. Toroid plus magnetic case equals 80 db shielding. **MQA Types:** Have Q of 40 at 500 cps, 160 at 5 kc, approx. 40 at 20 kc. Size, 11/16" x 1 9/32" x1 21/32"" h.; wt., 4 oz. **MQB Types:** Have Q of 40 at 250 cps, 250 at 3 kc, approx. 40 at 20 kc. Size, 1 3/16" x 2 9/16" x 2 13/16" h.; wt., 14 oz. **MQD Types:** Have Q of 40 at 5 kc, 185 at 50 kc, approx. 40 at 300 kc. Size, 11/16" x 1 9/32" x 1 21/32" h.; wt., 4 oz. **MQE Types:** Have Q of 20 at 600 cps, 140 at 10 kc, approx. 40 at 40 kc. Size, 1/2" x 1 1/16" x 1 7/32" h.; wt., 1.5 oz.

UTC Type	Ind., Hys.	Net Each	UTC Type	Ind., Hys.	Net Each	UTC Type	Ind., Hys.	Net Each
MQA-1	.007	$ 7.50	MQB-1	.010	$12.90	MQD-6	.020	$21.00
MQA-2	.012	7.80	MQB-2	.030	13.20	MQD-7	.030	22.80
MQA-3	.020	8.10	MQB-3	.070	13.50	MQE-0	.004	6.90
MQA-4	.030	8.40	MQB-4	.120	13.80	MQE-1	.007	7.20
MQA-5	.050	8.70	MQB-5	.50	14.10	MQE-2	.012	7.50
MQA-6	.070	9.00	MQB-6	1.0	14.40	MQE-3	.020	7.80
MQA-7	.120	9.30	MQB-7	2.0	14.70	MQE-4	.030	7.80
MQA-8	.20	9.60	MQB-8	3.5	15.00	MQE-5	.050	8.10
MQA-9	.30	9.90	MQB-9	7.5	15.90	MQE-6	.070	8.40
MQA-10	.50	10.20	MQB-10	12	16.80	MQE-7	.100	8.40
MQA-11	.70	10.50	MQB-11	18	18.00	MQE-8	.150	8.70
MQA-12	1.0	10.80	MQB-12	25	19.20	MQE-9	.250	8.70
MQA-13	1.5	11.10	MQB-13	40	21.00	MQE-10	.40	9.00
MQA-14	2.5	11.40	MQB-14	60	24.00	MQE-11	.60	9.00
MQA-15	4.0	12.00	MQD-0	.001	14.50	MQE-12	.90	9.30
MQA-16	6.0	12.90	MQD-1	.002	15.00	MQE-13	1.5	9.90
MQA-17	10.0	13.80	MQD-2	.003	15.60	MQE-14	2.0	10.80
MQA-18	15.0	15.00	MQD-3	.005	16.20	MQE-15	2.8	12.00
MQA-19	22.0	18.00	MQD-4	.007	16.80	MQE-16	4.0	13.50
MQA-20	35.0	20.70	MQD-5	.012	18.00			

Note: When requiring center-tapped units for oscillator applications, etc., specify Type TQA- units. When ordering Type TQA-1 thru TQA-15, add **$1.50** to MQA- price. UTC Type TQA-16, Net Each. . **$14.70**. UTC Type TQA-17, Net Each. . **$15.90**. UTC Type TQA-18, Net Each. . **$17.40**. UTC Type TQA-19, Net Each. . **$21.00**. UTC Type TQA-20, Net Each. . **$23.40**.

VARIDUCTORS★



HVC, TVC, HVV VIC

Ideally suited for use in tuning of oscillator circuits, tuned circuits, etc. **HVC Types:** Hermetically sealed to meet MIL-T-27B specifications and provide a wide inductance range with high Q in a compact unit. Units are usable over a wide frequency range and have high stability with temperature and voltage fluctuation. TVC inductors are the same as HVC units except they provide taps at 30% and 50% of total turns. Inductance range, −70% to +200% of the mean value through use of adjusting screw on top of case. **VIC Types:** Standard inductors that may be adjusted through use of a set-screw on the side of case. Inductance range, −45% to +85% of the value. **HVV Types:** For precise matching; vernier inductance variation ±10% of nominal value. Offer high Q over a wide frequency range and high temperature stability. **Size:** HVC, TVC and HVV types, 1 1/8" lg. x 25/32" w. x 1 7/32" h.; weight, 2 oz. VIC type, 1 11/32" lg. x 1 1/4" w. x 1 7/16" h.; weight, 5 1/2 oz. HVC and TVC, U.S. Pat. No. 2;879,489; HVV, Pat. pending.

UTC Type	Mean Hys.	DC Ma	Net Each	UTC Type	Mean Hys.	DC Ma	Net Each
HVC-1	.006	100	$ 9.00	TVC-6	.6	15	$11.10
HVC-2	.015	60	9.00	TVC-7	1.5	10	11.70
HVC-3	.040	40	9.00	TVC-8	4	7	11.70
HVC-4	.1	30	9.00	TVC-9	10	5	11.70
HVC-5	.25	20	9.00	TVC-10	25	3.5	12.90
HVC-6	.6	15	9.00	TVC-11	60	2	14.10
HVC-7	1.5	10	9.60	TVC-12	150	1.5	15.30
HVC-8	4	7	9.60	VIC-1	.0085	75	6.60
HVC-9	10	5	9.60	VIC-2	.013	60	6.60
HVC-10	25	3.5	9.90	VIC-3	.021	50	6.60
HVC-11	60	2	10.80	VIC-4	.034	40	6.60
HVC-12	150	1.5	12.00	VIC-5	.053	35	6.60
HVV-.006	.006	200	12.00	VIC-6	.084	30	6.60
HVV-.015	.015	120	12.00	VIC-7	.13	25	6.60
HVV-.04	.04	80	12.00	VIC-8	.21	21	6.90
HVV-.1	.10	50	12.00	VIC-9	.34	18	6.90
HVV-.25	.25	30	12.00	VIC-10	.54	15	6.90
HVV-.6	.6	20	12.00	VIC-11	.85	12	6.90
HVV-1.5	1.5	13	12.90	VIC-12	1.3	10	7.20
HVV-4	4	6	12.90	VIC-13	2.2	8	7.20
HVV-10	10	4.5	12.90	VIC-14	3.4	7	7.20
HVV-25	25	3	13.20	VIC-15	5.4	6	7.50
HVV-60	60	2	14.40	VIC-16	8.5	5	7.50
HVV-150	150	1.3	15.90	VIC-17	13	4	7.50
TVC-1	.006	100	11.10	VIC-18	21	3.5	7.80
TVC-2	.015	60	11.10	VIC-19	33	3	7.80
TVC-3	.040	40	11.10	VIC-20	52	2	8.40
TVC-4	.1	30	11.10	VIC-21	83	1.5	9.00
TVC-5	.25	20	11.10	VIC-22	130	1	12.00

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SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

Miniature Transformers

SUBOUNCER★ AND SUB-SUBOUNCER★ HERMETICALLY SEALED TRANSISTOR AND TUBE TYPE AUDIO TRANSFORMERS


SML-70


SO- P


SSO- P

Ideal miniaturized components offer high efficiency and wide frequency response. Special nickel-iron core materials and winding methods assure exceptional performance and reliability. These units are vacuum molded to MIL Grade 5. Employ 40 mil, deeply anchored pin terminals ideally suited for printed circuit and transistor applications. Terminals are strong enough to support these light weight units.

SUBOUNCER★ PRINTED CIRCUIT MOLDED TO MIL GRADE 5

Size: ¾" x 1" x ²³⁄₃₂". Pin length, ¼". Weight, .05 lb.

UTC Type	Application	MIL Type	Imped.,Ohms Primary	Imped.,Ohms Second.	Net Each
SO-2P	Interstage, 3:1	TF5RX15ZZ	10K	90K	$6.90
SO-3P	Plate to line	TF5RX13ZZ	10K 25K	200 500	6.90
SO-5P	Inductor: 40 hy at 1 ma, 2675 ohms, series; 4 hy at 4 ma, 670 ohms, parallel; TF5RX20ZZ				6.90
SO-7P	Transistor interstage	TF5RX13ZZ	20K 30K	800 1200	6.60
SO-8P	Tr. to p-p sec.	TF5RX13ZZ	10K	2000 CT	7.50
SO-9P	P-p tr. to V.C.	TF5RX17ZZ	500 CT	3.2	7.50
SO-14P	Transistor interstage	TF5RX17ZZ	80 CT 100 CT	32 spl. 40 spl.	7.80
SO-15P	Tr. output	TF5RX17ZZ	600 CT	600 spl.	7.80
SO-17P	Inductor: 16 hy at 2 ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel; TF5RX17ZZ				6.90

HIPERMALLOY SHIELD CASE AUDIO UNIT

Ultra-miniature transformer provides high shielding, extremely low insertion loss with wide band response, 200–20,000 cps. Provided with pin terminals .025" dia., strong enough to support the unit. Ideal for printed circuits. Size: ⁷⁄₁₆" x ³¹⁄₆₄" x ⁹⁄₁₆". Wt., .2 oz.

UTC Type	Application	MIL Type	Imped., Ohms Primary	Imped., Ohms Second.	Net Each
SML-70	Input or chopper	TF5RX16ZZ	200K	1K	$8.40

SUB-SUBOUNCER★ PRINTED CIRCUIT MOLDED TYPES TO MIL GRADE 5

Size: ¾" x ⅞" x ⁹⁄₁₆". Pin length, ¼". Weight, .04 lb.

UTC Type	Application	MIL Type	Imped., Ohms Primary	Imped., Ohms Second.	Net Each
SSO-3P	Plate to line	TF5RX13ZZ	10K 25K	200 500	$7.20
SSO-5P	Inductor: 100 hy at 0 ma, 4.4K ohms, series; 25 hy at 0 ma, 1.1K ohms, parallel; TF5RX20ZZ				6.90
SSO-8P	Tr. to p-p sec.	TF5RX13ZZ	10K	2000 CT	7.20
SSO-14P	Transistor interstage	TF5RX13ZZ	10K CT 25K CT	200 CT 500 CT	7.50
SSO-15P	Transistor interstage	TF5RX13ZZ	20K CT 30K CT	800 CT 1200 CT	7.50
SSO-19P	Outp. matching	TF5RX17ZZ	500 CT	600 CT	7.20
SSO-20P	Output	TF5RX17ZZ	1.5K CT	600 CT	7.20
SSO-21P	Crys./chopper	TF5RX16ZZ	200K CT	1000 CT	8.10
SSO-22P	Interstage	TF5RX13ZZ	10K CT 12K CT	1500 CT 1800 CT	7.20
SSO-23P	Inductor: 8 hy at 2 ma, 600 ohms, series; 2 hy at 4 ma, 150 ohms, parallel; TF5RX20ZZ				6.90
SSO-24P	Inductor: 3.5 hy at 2 ma, 160 ohms, series; 0.9 hy at 4 ma, 40 ohms, parallel; TF5RX20ZZ				6.90
SSO-25P	Transistor interstage	TF5RX13ZZ	10K CT	10K/ 2.5K spl.	8.10
SSO-27P	Transistor Output or Driver	TF5RX13ZZ	4K CT	600 spl.	8.10

OUNCER★ AUDIO UNITS

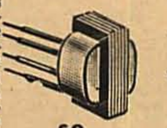
STANDARD AND PLUG-IN UNITS


Plug-In Ouncer

UTC Ouncer components are fully impregnated and sealed against severe environmental conditions in a drawn aluminum housing. Only ⅞" in diameter, they are ideal for mounting opposite terminal boards. Ideal for use in portable radios, aircraft, etc. Wide-frequency range characteristics are provided, ±1 db, 30-20,000 cps response except where indicated otherwise. "P" units are identical in all respects except are housed in a Bakelite* case with octal plug-in pins. UTC Type O-16 has heavy shielding (1⅛" dia.) Wt., 3 oz.; P-16 has 9-pin plug (1⁵⁄₁₆" dia.). Weight, 4 oz. Weight of Ouncers, 1 oz., max. *Bakelite Corp. trademark.

UTC Type	Net Each	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	UTC Type	Net Each
O-1	$ 7.80	Input	50, 200, 500	50K	P-1	$ 9.00
O-2	7.80	P-p input	50, 200, 500	50K CT	P-2	9.00
O-3	7.50	Input	7.5/30	50K	P-3	8.40
O-4	6.60	Pl. to grid	15K	60K	....	......
O-5	6.60	Pl. to grid	15K, 4 ma	60K	....	......
O-6	7.50	Pl. to p-p	15K	95K CT	P-6	8.40
O-7	7.50	Pl. to p-p	15K, 4 ma	95K CT	P-7	8.40
O-8	7.80	Pl. to line	15K	See O-1 pri.	P-8	9.00
O-9	7.80	Pl. to line	15K, 4 ma	As above	P-9	9.00
O-10	8.40	P-p to line	30K CT	As above	P-10	9.00
O-11	7.80	Cry. to line	50K	As above	P-11	9.00
O-12	7.80	Mixing	50, 200, 500	As above	P-12	9.00
O-13	6.30	Inductor: 300 hy–0 ma, 6000 ohms			....	......
O-14	7.50	50:1 input	200	500K	....	......
O-15	7.50	10:1 P/G	10K	1 meg.	P-15	9.00
O-16	10.20	Shld. input	250 CT	50K	P-16	11.40
O-17	1.50	Hipermalloy shield, 25 db, for Ouncers			....	......
O-18	7.80	Tr. intrstg.	10K split	2K split	....	......
O-19	7.80	Tr. intrstg.	10K split	4K split	....	......
O-20	6.30	Tr. to line	1.5K CT	500 split	....	......
O-21	5.40	Tr. to V.C.	2K/4K CT	8/16	....	......
O-22	5.40	Tr. to V.C.	500/400 CT	4/3.2	....	......
O-23	5.10	Inductor: 7 hy–3 ma, 230 ohms			....	......
O-24	5.10	Inductor: 1.6 hy–3 ma, 25 ohms			....	......
O-25	8.10	Tr. input	600/150 sp.	2K/500 split	....	......
O-26	8.10	Tr. intrstg.	10K CT, 4 ma	10K CT	....	......
O-27	8.40	Tr. intrstg.	10K CT, 4 ma	500/125 split	....	......
O-28	8.40	Tr. intrstg.	50K CT, 2 ma	500/125 split	....	......
O-29	8.70	Tr. intrstg. or chopper	100K CT, 1 ma	500/125 split	....	......
O-30	8.10	Tr. intrstg.	500/125 split	500/125 split	....	......
O-31	8.10	Tr. intrstg.	500/125 split	150/37.5 sp.	....	......
O-32	8.10	Tr. intrstg.	500/125 split	50/12.5 split	....	......
O-33	8.10	Tr. intrstg.	100/25 split	40/10 split	....	......
O-34	5.10	Spl. induct.: 60 mh–80 ma, 4 ohms, series; 15 mh–160 ma, 1 ohm, parallel			....	......
O-36	5.10	Spl. induct.: 1 hy–20 ma, 60 ohms, series; 0.25 hy–40 ma, 15 ohms, parallel			....	......
O-37	8.10	Tr. to line	4K/1Kspl.,4ma	650/150 split	....	......
O-38	5.10	Spkr. match	0, 4, 8, 16 ODC	....	....	......
O-BR	.21	Mounting U-bracket for ouncers			....	......

SUB-SUBOUNCERS★ AND SUBOUNCERS★


SO


SSO

Miniature nickel-iron core units for use in vacuum tube and transistorized circuitry. Units are vacuum sealed for highest dependability. Windings are wound on high-quality nylon bobbins; plastic insulated leads, 4" l., color coded. No mounting facilities are provided. Units may be used for impedances other than those indicated, keeping in mind that the impedance ratio is constant. Units may be reversed, input to secondary. Subouncer units handle a higher level than Sub-Subouncers. Constructional details are identical. Available hermetically sealed on special order. **SSO Sub-Subouncers:** Approx. 2 db, 140–10,000 cps. Size: ⁷⁄₁₆" x ¾" x ⁴³⁄₆₄"; weight, .02 lb. **SO Subouncers:** Approx. 2 db, 100–10,000 cps. Size: ¹⁹⁄₃₂" x ²³⁄₃₂" x ⅞"; weight, .03 lb.

UTC SSO-	Net Each	Application	Pri. Imp., Ohms	Sec. Imp., Ohms	UTC SO-	Net Each
1	$4.50	Input	50/200	62.5K/250K	1	$3.60
2	4.80	Interstage	10K, .25 ma	90K	2	3.30
3	4.20	Pl. to line	10K/25K*	200/500	3	3.30
4	3.90	Output	30K, 1 ma	50	4	3.30
5	3.90	Inductor	50 hys. @ 1 ma	4400 ohms♯	5‡	3.00
6	4.20	Output	100K, .5 ma	60	6	3.90
7	3.30	Tr. intrstg.	20K/30K†	800/1200	7	3.00
8	3.90	Tr. intrstg.	10K, 1 ma	2K CT	8	3.60
9	3.00	Tr. to V.C.	10K, 2 ma	16	....	.....
.....	.....	Tr. to V.C.	500 CT	3.2	9	3.60
10	3.00	Tr. to V.C.	10K, 2 ma	3.2	....	.....
.....	.....	Tr. to V.C.	2K/4K CT	8/16	10	3.60
11	3.00	Tr. output	500/600§	50/60	....	.....
.....	.....	Tr. intrstg.	400/500 CT	400/500 split	11	4.20
12	3.00	Tr. output	1K/1.2K††	50/60	....	.....
.....	.....	Tr. intrstg.	400/500 CT	120/150 split	12	4.20
13	4.50	Input	200K	1K	....	.....
.....	.....	Tr. intrstg.	400/500 CT	40/50 split	13	4.20
14	4.20	Tr. intrstg.	10K/25K CT	200/500 CT	....	.....
.....	.....	Tr. intrstg.	80/100 CT	32/40 split	14	4.20
15	4.20	Tr. intrstg.	20K/30K CT	.8/1.2K CT	....	.....
.....	.....	Tr. output	600 CT, 6 ma	600 split	15	4.20
16	3.00	Tr. output	1.2K/1.5K††	3.2/4	....	.....
.....	.....	Tr. intrstg.	2.5K CT, 4 ma	2500 split	16	4.20
17	3.30	Output	10K/12.5K**	500/600 CT	....	.....
.....	.....	Inductor: 16 hy at 2 ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel			17	3.30
18	3.30	Output	7.5K/9.4K CT	3.2/4	....	.....
19	3.30	Matching	500 CT	600 CT	....	.....
20	3.30	Output	1.5K CT	600 CT	....	.....
21	4.80	Chopper	200K CT	1K CT	....	.....
22	3.90	Tr. intrstg.	10K/12K CT	1.5K/1.8K CT	....	.....
23	3.00	Inductor: 4 hys. @ 5 ma, 650 ohms			....	.....
24	3.00	Inductor: 1.5 hys. @ 5 ma, 160 ohms			....	.....
25	5.10	Tr. intrstg.	10K/12K CT	10K/12K CT	....	.....
26	5.10	Tr. intrstg.	40K/50K CT	400/500 split	....	.....
27	5.10	Tr. output	4K CT, 2.5 ma	600 split	....	.....
CH	.30	Mounting channel for any of above			CH	.30

*1.5 ma. †0.5 ma. ‡Resis., 2675 ohms. §3.5 ma. **2 ma. ††3 ma. ♯DC resis.

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Hi-Fi, Broadcasting Components

HI-FI, AUDIO TRANSFORMERS

ULTRA COMPACT★ HI-FI AUDIOS

Compact, rugged audio transformers, small in size and light in weight, for use in remote amplifier and similar compact equipment. High fidelity frequency response is obtainable in all units. Frequency response, ±2 db, 20-20,000 cps, except where noted. All units except those carrying DC in primary employ a hum-balancing coil structure, combined with a high conductivity outer shell, effecting good inductive shielding. Case is die-cast, mounts top or bottom. **Size:** 1⅜" x 1⅜" x 2" h. Weight, ½ lb.

UTC Type	Use	Primary Impedance, Ohms	Sec. Impedance, Ohms	#	Net Each
A-10	Input	50, 125/150, 200/250, 333, 500/600	50K split	a	$13.20
A-11	Shld. Input	50, 200, 500	50K CT	a	12.00
A-12	Input	Same as A-10	80K split	a	12.00
A-15	Interstage*	10K/2.5K split**	2K/500 split	c	9.90
A-16	Pl. to grid	15K	60K	a	9.90
A-17	Pl. to grid	15K, 8 ma	60K	c	12.00
A-18	Pl. to p-p	15K split	80K split	a	12.00
A-19	Pl. to p-p	15K, 8 ma	80K split	c	12.00
A-20	Mixing	Same as A-10	Same as pri.	d	14.40
A-21	Sh. mixing	50, 200/250, 500/600	Same as pri.	e	12.00
A-22	Tr. to line*	500 CT	500/125 sp.	c	9.90
A-23	Tr. to V.C.*	500 CT	16/4 split	c	9.90
A-24	Pl. to line	15K split	See A-10 pri.	f	12.90
A-25	Pl. to line	15K, 8 ma	See A-10 pri.	c	12.00
A-26	P-p to line	30K CT	See A-10 pri.	f	13.20
A-27	Input	100K split	See A-10 pri.	b	12.00
A-28	Tr. to V.C.	48 CT, 5 watts	16 split, 8, 4	c	10.20
A-34	Tr. intstge.	25K/6250 split	500/125 sp.	b	10.20
A-35	Tr. intstge.	10K/2.5K split	500/125 sp.	b	9.90
A-36	Tr. intstge.	500/125 split	150/37.5 sp.	c	9.60
A-37	Tr. intstge.	500/125 split	50/12.5 sp.	c	9.60
A-38	Tr. intstge.	100/25 split	40/10 split	c	9.30
A-39	Line to tr.	600/150 split	2K/500 sp.	a	11.10
A-30	Inductor: 250 hys. at 5 ma†, series 65 hys. at 10 ma‡;				10.20
A-32	Split inductor: 60 hys. at 15 ma§; 15 hys. at 30 ma††				6.60
A-33	Hipermalloy shield fits A units; 20 db				2.70
A-40	Power transf.: 115 v., 60 cps to 2-6.3 CT-.2 a sec.				9.90
A-41	Split inductor 240 mh at .2 a, 6 ohms, series; 60 mh at .4 a, 1.5 ohms, parallel				6.30
A-42	Split filter induct: 4 hy-50 ma, 100 ohms, series; 1 hy-100 ma, 25 ohms, parallel				6.60
A-43	Match 2 simul. lines or tr.: 600/150 spl. ohms, pri.; two 600/150 spl. ohms, sec.			g	14.10
A-44	I'stge/outp.	4K/1K split, 12 ma	600/150 spl.	b	9.90
A-45	Spkr. match	4, 8, 16	4 w. max lvl.	c	6.60
A-46	Chopper	10K/2.5K	50K	...	15.00
A-47	3-wdg. hybd.	500/600 CT	2x500/600CT	...	15.00

*+30 dbm. †6K ohms. ‡1.5K ohms. §2K ohms. ††500 ohms. **8 ma. #Frequency Response (±2 db), cps: a—20-20,000. b—30-20,000. c—40-20,000. d—10-50,000. e—30-30,000. f—20-40,000. g—20-30,000.

HIPERMALLOY★ TRANSFORMERS

H-1

H-2

Hipermalloy audio and power transformers are designed specifically for use in portable and compact equipment. Neither dependability or wide-range response has been sacrificed. The frequency characteristic of hipermalloy audio transformers is uniform 30-20,000 cps; incorporation of a hipermalloy-nickel iron core and hum balanced coil structure is responsible. Case is rugged, die-cast type of high conductivity alloy, finished in gray. Mounts with terminals up or down. DC in primary as shown is maximum, unbalanced. **Size:** H-1 Case, 2⅜" l. x 1⅞" w. x 3⅛" h. H-2 Case, 3⅝" l. x 2⅞" w. x 3½" h. Mtg. screws, 6-32. Weight: H-1 case, 2 lbs.; H-2 case, 5 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Units housed in Type H-1 case.

UTC Type	Application	Pri. Imped., Ohms	Sec. Imp., Ohms	Level dbm	Net Each
HA-100	Line to grid	50, 125/150, 200/250, 333, 500/600	60K split	+18	$17.40
HA-100X	Line to grid*	As above	As above	+16	17.40
HA-101	Line to grids	As above	120K split	+18	22.20
HA-101X	As above*	As above	80K split	+16	18.00
HA-103A	Mike mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60K split	+18	15.00
HA-108†	Mixing	Same as HA-100	Same as pri.	+20	19.80
HA-108X†	As above*	As above	Same as pri.	+18	19.80
HA-130X	Line to grids	30, 50, 200/250	60K split	+18	21.00

INTERSTAGE AUDIO TRANSFORMERS

Units housed in Type H-1 case; HA-107 in H-2 case.

HA-104	Pl. to grids	15K split	95K	100#	$15.00
HA-105	Pl. to grids	15K	60K	100#	21.00
HA-106	Pl. to grids	15K split	135K	100#	18.90
HA-107	Pl's. to grids	30K	80K	600#	27.00
HA-137	Pl's. to grids	30K	68K	100#	16.80

*Multiple-alloy shields for low hum pickup. †High electrostatic shielding. #Level in mw.

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LINEAR STANDARD★ TRANSFORMERS

Frequency response, ±1 db, 20-20,000 cps; ±1 db, 7-50,000 cps on high level units. These transformers offer uniform frequency response of wide range and low distortion. High efficiency, dependability, and freedom from hum are provided by shielding. Mount from top or bottom. Die-cast case. Guaranteed frequency response.

LOW LEVEL TRANSFORMERS

Case Type LS-1. **Size:** 2⅝" x 3⅛" x 3⅛" h. Suffix "X" indicates units that have multiple alloy shield. Weight, 3 lbs.

UTC Type	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	Level*	Net Each
LS-10	Input	50, 125/150, 200, 250, 333, 500/600	60K split	+19	$24.00
LS-10X	Input	As above	50K	+17	24.00
LS-12	Input	As above	120K split	+19	27.00
LS-12X	Input	As above	80K split	+17	24.00
LS-30	Mixing	As above	Same as pri.	+23	24.00
LS-30X	Mixing	As above	Same as pri.	+20	27.00
LS-19	Pl. to grids	15K	95K	+20	19.50
LS-21	Pl. to p-p	15K split	135K split	+20	24.00
LS-40	Pl. to p-p	15K, 8 ma	135K split	+20	33.00
LS-25	P-p to p-p	30K split	50K split	+23	27.00
LS-27	Pl. to line	15K, 8 ma	See LS-10 pri.	+23	24.00
LS-50	Pl. to line	15K	See LS-10 pri.	+23	24.00
LS-51	P-p to line	30K split	See LS-10 pri.	+24	27.00
LS-14X	Lo-Z to grids	2.5, 5.5, 10, 15, 22, 30, 38, 60	50K	+17	24.00
LS-26	Line to grids	5K	60K	+23	27.00
LS-31	Line to line	30, 50, 200, 250	See LS-10 pri.	+23	24.00
LS-32	Lo-Z to line	Same as LS-14X	See LS-10 pri.	+23	33.00
LS-68	Matching‡	600/150 split	(2) 600/150 split	+15	24.00
LS-150	Line to line	4K	See LS-10 pri.	+23	21.00
LS-151	Line to line	16K	See LS-10 pri.	+26	21.00
LS-140	70 db hybrid	500/600 split	Same as pri.	+18	27.00
LS-141	Hybrid†	500/600 split	Same as pri.	+18	21.00

*In dbm. †Has three sets of coils. ‡Two simult. lines or tr.

HIGH LEVEL TRANSFORMERS

Case style similar to Low Level units. **Size:** LS-33, -34, -35, -47, -52, -54, -55, -56, -57, -61, -63, 3½" x 4⅞" x 4⅜" h. (Wt., 7½ lbs.). LS-6L1, -6L4, -48, -58, -65, -666, -667, 5" x 5⅞" x 4⅞" h. (Wt., 15 lbs.). LS-691, 13" x 15¾" x 24" h. (Wt. 370 lbs.). LS-692, 13" x 15¾" x 28" h. (Wt., 520 lbs.).

UTC Type	Application	Pri. Imped., Ohms	†	Level, Watts	Net Each
LS-33	Matching	50, 125/150, 200/250, 333, 500/600	a	20	$ 24.00
LS-34	Matching	As above	a	40	33.00
LS-47	Driver	5K	i	20	24.00
LS-48	Driver	12K	j	40	60.00
LS-6L1	P-p output	9K	b	30	36.00
LS-6L4	P-p output	4.5K/3.8K	b	55	66.00
LS-58	P-p output	2.5K/1.5K	b	40	57.00
LS-52	P-p output	8000 split	b	20	24.00
LS-55	P-p output	5K/3K split	b	20	24.00
LS-61	P-p output	10K/6K split	b	20	24.00
LS-54	P-p output	8000 split	c	20	21.00
LS-57	P-p output	5K/3K split	c	20	21.00
LS-63	P-p output	10K/6K split	c	20	21.00
LS-56	P-p output	5K/3K split	d	20	27.00
LS-35	EL-34's*	5K CT 43% taps	e	35	24.00
LS-65	6550's*	3.3K CT 40% taps	e	60	42.00
LS-666	P-p transis.	8 split	f	50	21.00
LS-667	P-p transis.	8 split	e	50	21.00
LS-691	Modulation	10,400	g	1,000	600.00
LS-692	Modulation	4,750	h	2,500	930.00

*With feedback loops. †Secondary impedance: a—1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200/250, 333, 500/600 ohms. b—500, 333, 250/200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. c—30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. d—6K, 5K, 4K, 1.8K, 1.5K, 1K, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. e—4, 8, 16 ohms. f—500 ohms split. g—4.5K, 4K, 3.5K, 2.75K, 2K ohms. h—2.5K, 2K, 1.75K, 1.5K, 1.25K ohms. i—Pri./½. Sec. 3.2:1. j—Pri./½. Sec. 5.1:1

PLATE-TO-LINE TRANSFORMERS

Units housed in H-1 case.

UTC Type	Application	Pri. Imp., Ohms	Sec. Imped., Ohms	Level Mw	Net Each
HA-113	To multi-line	15K split	50, 125/150, 200/250, 333, 500/600	125	$18.00
HA-114	Lo-Z/multi-line	30K	Same as above	200	21.00
HA-133	To multi-line	15K split	Same as above	160	21.00

OUTPUT TRANSFORMERS

HA-134†	P-p to line	5K/9.4K	50, 125/150, 200/250, 330, 500/600	15 w.	$16.80
HA-135†	P-p to v-c	3K/5K	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	18 w.	16.80
HA-136†	5881's*	6.6K	4, 8, 16	20 w.	18.00

*Screen taps provided. †Housed in Type H-2 case.

POWER TRANSFORMERS

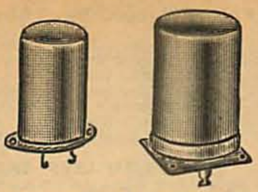
Units housed: Type HP-122, H-1 case; HP-123, H-2 case.

UTC Type	Application	Pri. Volts 50-60 Cps	Hi-Voltage	Filament Winding	Net Each
HP-122	Preamp	115	220-0-220, 15 ma	6.3 v. CT, .6 a.; 6.3 v. CT, 1.2 a.	$12.00
HP-123	Preamp or tuner	115	275-0-275, 35 ma	6.3 v. CT, .6 a.; 6.3 v. CT, 2 a.	12.00

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY SPECIFICATIONS

Commercial Grade Components

COMMERCIAL GRADE COMPONENTS



Conservative design and rugged construction assure dependability under continuous service. Cases are attractively finished in light gray enamel and are intended for chassis mounting. All items are poured with a special sealing compound plus vacuum impregnation of coil structures to insure operation under severe environmental conditions. All audio components are linear, ±1 1/4 db, 40-10,000 cps (no unbalanced DC), except CVL and CVM units, 40-6,000 cps. CG-134, -135, -136 are humbucking type to assure low hum pickup. Parallel feed, low level interstage units, 50,000 ohms and .25 μf; 200 ohm windings on input transformers are balanced and may be used for 150-250 ohm circuits. Case sizes are given in the table below. **For CG type transistor/filament supply transformers see fourth UTC page.**

SIZE, COMMERCIAL GRADE CASE "RC"

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Ht., +1/8, −1/16	Cutout Dia.	Unit Wt. (Lbs.)
RC-37	1 3/8	1 1/8	1 5/8	1 1/4	.35
RC-50	1 5/8	1 5/16	2 1/4	1 1/2	1/2
RC-62	1 13/16	1 1/2	2 1/2	1 1/2	1
RC-75	2 3/16	1 13/16	2 7/8	1 7/8	1 1/2
RC-87	2 9/16	2 3/32	3 1/4	2	2 1/2
RC-100	3	2 3/8	3 3/4	2 5/8	3 1/2
RC-112	3 7/16	2 11/16	4 1/8	2 7/8	5
RC-125	3 3/4	3	4 1/2	3	6 1/2
RC-150	4 1/2	3 9/16	5 1/2	3 3/4	11
RC-152	5 1/8	4 1/8	5 1/2	4	15 1/2
RC-175	5 3/4	4 7/8	7	4	22

SWINGING INPUT AND FILTER CHOKES

UTC Type	Induct. Henries	DC MA	DC Res. Ohms	Test Volts	Case No.	Net Each
CG-40	10	200	110	1750	RC-112	$ 8.10
CG-44	30	100	400	1750	RC-100	6.90
CG-45	250	15	5000	1750	RC-87	6.00
CG-48C	75	50	2200	1750	RC-87	7.50
CG-100	12	150	110	2500	RC-125	9.00
CG-102	12	250	100	3000	RC-150	13.20
CG-104	10	350	90	5000	RC-152	15.00
CG-108	10	500	52	7000	RC-175	27.00
CG-1S	10	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 h.†	54.00
CG-101	25/5	150	110	2500	RC-125	9.00
CG-103	25/5	250	100	3000	RC-150	13.20
CG-105	25/5	350	90	5000	RC-152	15.00
CG-109	25/5	500	52	7000	RC-175	27.00
CG-111* (2 wdgs)‡	100/10 mh 25/2.5 mh	2.5 a. .5 a.	.6 .15	1500	RC-87	11.40
CG-112* (2 wdgs)‡	40/10 mh 10/2.5 mh	6 a. 12 a.	.24 .06	1500	RC-112	12.60
CG-113* (2 wdgs)‡	7/1.75 mh 1.8/.45 mh	17.5 a. 35 a.	.036 .009	1500	RC-125	14.70
CG-1C	25/5	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 h.†	54.00

*Split winding in series. †Wt., 40 lbs. ‡Split winding in parallel.

POWER AND BIAS TRANSFORMERS

Primary 115 volts, 50/60 cycles. Ma DC is for choke input; reduce 70% for condenser input. Filament 1 is 5 volts, 3 amps and Filament 2 is 5 volts, 2 amps, except as otherwise noted.

UTC Type	High Voltage	DC Ma	Filament 3	Filament 4	Case No.	Net Each
CG-422	435-365-0-365-435 125-0-125	125 25	6.3 VCT-3A	2.5 VCT-5A	RC-150	$21.00
CG-428	500-0-500 80-0-80	250 100	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152	24.90
CG-429*	600-525-0-525-600	250	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152	24.90
CG-431†	500-400-0-400-500 80-0-80	500 100	6.3 VCT-5A	6.3 VCT-3A	RC-175	36.00
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6%—250 MA				RC-125	14.40
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6%—250 MA				RC-152	21.00

*Filament 2 is 6.3 VCT-3A. †Filament 1 is 5V-6A.

VARIPOWER AUTOFORMERS

Designed for line voltage control, filament control and reduced power operation. Output voltage: 0-130 volts, 50/60 cps. Permit control of filament voltage at tube socket to ±2 1/2% simultaneously with line and plate voltage control. Use to reduce or increase voltages on filament transformers. Taps at: 25, 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

UTC Type	Watts Output	Case No.	Net Each	UTC Type	Watts Output	Case No.	Net Each
CVA-1	150	RC-112	$12.00	CVA-4	1000	RC-152	$21.00
CVA-2	250	RC-125	14.10	CVA-5	2000	RC-175	36.00
CVA-3	500	RC-150	18.00				

AUDIO UNITS

UTC Type	Use †	Pri. Imped., Ohms	Level	Case RC-	Net Each
CG-131	a	15K	+28 dbm	50	$ 9.90
CG-132	b	15K	+30 dbm	62	9.90
CG-133	c	30K CT	+32 dbm	75	10.50
CG-134	d	50, 200, 500	+30 dbm	50	9.00
CG-135	e	50, 200, 500	+30 dbm	50	9.90
CG-235	f	50, 200, 500	+28 dbm	75	12.00
CG-136	g	15K, 50, 200	+30 dbm	62	13.20
CG-137	h	50, 200, 500	+28 dbm	50	8.40
CG-140	i	15K	+30 dbm	50	7.80
CG-141	j	30K CT	+32 dbm	50	9.00
CG-233	k	30K CT	+35 dbm	87	9.00
CG-333	k	30K CT	+35 dbm	87	9.00
CG-433	k	5K CT	10 w.	100	9.90
CG-15	l	8K CT	20 w.	100	12.00
CG-16	l	3K/5K CT	20 w.	100	12.00
CG-19	l	6K/10K CT	20 w.	100	12.00
CG-710	l	14K/20K CT	20 w.	100	12.00
CG-2L6	l	9K CT	30 w.	125	13.80
CG-20	m	5K CT, 43% screen taps	25 w.	125	15.00
CG-21	m	3.3K CT, 40% screen taps	50 w.	150	24.00
CVP-1	n	3K/5K/6K/8K/10K/14K CT	12 w.	100	13.20
CVP-2	n	As above	30 w.	125	14.40
CVP-3	n	As above	60 w.	150	21.00
CVP-4	n	As above	125 w.	152	24.00
CVP-5	n	As above	300 w.	175	39.00
CVL-1	p	500	15 w.	87	9.00
CVL-2	p	500	40 w.	125	10.50
CVL-3	p	500	75 w.	150	15.00
CVM-0	q	Any Class B	12 w.	100	10.50
CVM-1	q	As above	30 w.	125	13.80
CVM-2	q	As above	60 w.	150	18.00
CVM-3	q	As above	125 w.	152	21.00
CVM-4	q	As above	300 w.	175	39.00
CVM-5	q	As above	600 w.	*	105.00
CG-51AX	r	15K	5 w.	87	9.00
CG-53AX	r	3K/10K CT	20 w.	112	10.50
CG-59AX	r	50, 200, 500	20 w.	112	10.80

*7" x 12" x 9"; Wt., 82 lbs. †**a**—Pl. to grid. **b**—Pl. to 2 grids. **c**—2 pl. to 2 grids. **d**—Input, humbucking. **e**—P-p input, humbucking. **f**—Input, mag. shielded. **g**—Dual input, humbucking. **h**—Mixing. **i**—Pl. to line. **j**—P-p to line. **k**—Driver. **l**—Output. **m**—Feedback output. **n**—Universal output. **p**—Universal matching. **q**—Universal modulator. **r**—Universal driver.

PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts; 50/60 cycles. For reduced power, secondary can be cut in half, using 220 v. primary on 110 volts; may be used on 25 to 43 in this case. **Suffix W:** Indicates units designed for full wave center tap and full wave bridge applications. Center tap may be disconnected from ground.

UTC Type	High Voltage	DC Volts	Case RC-	Net Each
CG-300	625-515-0-515-625	500/400	150	$16.20
CG-300W	625-515-0-515-625	1000/800	150	17.70
CG-301	580-530-300-0-300-530-580	475/425/250	152	24.00
CG-301W	580-530-300-0-300-530-580	950/850/500	152	26.40
CG-302	950-750-0-750-950	760/610	175	30.00
CG-302W	950-750-0-750-950	1520/1220	175	33.00
CG-303	1500-1235-400-0-400-1235-1500	1250/1000/300	175	36.00
CG-303W	1500-1235-400-0-400-1235-1500	2500/2000/600	175	39.60

END CASTING UNITS

Suffix W: Units designed for full wave center tap and full wave bridge applications. Center tap may be disconnected from ground.

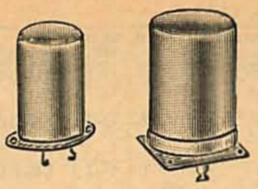
UTC Type	High Volt	DC Volts	Size, Inches L.	W.	H.	Wt Lb.	Net Each
CG-304	1500-1235-0-1235-1500	1.25K/1K	14 5/8	8 1/2	10 3/8	100	$141.00
CG-304W	1500-1235-0-1235-1500	2.5K/2K	14 5/8	8 1/2	10 3/8	100	156.00
CG-305	2400-1750-0-1750-2400	2K/1.5K	10 1/2	4 3/4	6 7/8	50	63.00
CG-305W	2400-1750-0-1750-2400	4K/3K	10 1/2	4 3/4	6 7/8	50	69.00
CG-306	as above	2K/1.5K	13 7/8	8 1/2	10 3/8	100	150.00
CG-306W	as above	4K/3K	13 7/8	8 1/2	10 3/8	100	165.00
CG-307	3500-3000-2400-0-2400-3000-3500	3K/2.5K 2K	13 5/8	8 1/2	10 3/8	90	138.00
CG-308	as CG-307	3K/2.5K 2K	15 1/8	8 1/2	10 3/8	125	162.00
CG-309	as CG-307	3K/2.5K 2K	21	10	13 1/4	253	360.00
CG-310	4600-4050-3500-0-3500-4050-4600	4K/3.5K 3K	17 1/4	10	13 1/4	150	309.00
CG-311	1500-1235-0-1235-1500	1.25K/1K	10 1/2	4 3/4	6 7/8	50	66.00
CG-311W	1500-1235-0-1235-1500	2.5K/2K	10 1/2	4 3/4	6 7/8	50	69.00
CG-312	1800-1500-0-1500-1800	1.5K/1.25K	10 1/2	4 3/4	6 7/8	38	66.00

Also see first UTC page for full wave bridge rectifier types.

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

Commercial & MS Transformers

TRANSISTOR TRANSFORMERS (COMMERCIAL TYPE)
TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS



CG Types

FT Type

Primary, 115 v. AC, 50/60 cps

UTC Type	Sec. Volts RMS	Sec. Amps RMS	Sections in Parallel				Sections in Series				Net Each
			Choke Inp.		Cond. Inp.		Choke Inp.		Cond. Inp.		
			VDC	ADC	VDC	ADC	VDC	ADC	VDC	ADC	
CG-30*	17/21.5 17/21.5	1.5 1.5	14/17.5	3	18.5/25	2	28/35	1.5	43/56	1	$18.90
CG-31†	34/43 34/43	4.5 4.5	28/35	9	43/56	6	56/70	4.5	85/110	3	42.00
CG-32‡	6.3 CT	1.2	......	....	......	....	.....	....	......	....	10.50

Case Nos.: *RC-112; †RC-175; ‡RC-62. **(See previous UTC page for case sizes.)**

Primary, 105/115/210/220/230 v. AC, 50/60 cps
All are as above, except Type CG-34, 105/115/220/230 v. AC. These transformers may be operated on 25 to 43 cps if 220 v. primary is utilized on 110 v.: simultaneously the secondary voltage is reduced by half. **See previous UTC page for complete listing of CG Series types and case dimensions.**

UTC Type	Secondary		WVDC	Sec. Test VRMS	Case No.	Net Each
	VCT	Amps				
CG-33	6.3	4	500	2000	RC-75	$ 9.00
CG-34	2.5	10	2500	6000	RC-112	10.20
CG-35	6.3	6	500	2000	RC-87	9.60
CG-36	6.3/6.3	5/5	500	2000	RC-100	13.50
CG-120	2.5	10	5000	11000	RC-125	15.00
CG-121	5	25	5000	11000	RC-150	18.00
CG-122	7.5/6.3	10	1500	4000	RC-125	15.00
CG-124	10	10	1500	4000	RC-150	15.00
CG-125	14/12/11	10	1500	4000	RC-150	18.00
CG-126	14/11/10 14/11/10	10 10	1500	4000	RC-152	24.00

CHANNEL FRAME TYPE
Primary, 115 v. AC, 50/60 cps. Test v. rms, 1500.

UTC Type	Secondary		Size, Inches				Wt., Lbs.	Net Each
	VCT	Amps	W.	D.	H.	Mtg.		
FT-1	2.5	3	2 7/8	1 5/8	1 11/16	2 3/8	3/4	$4.05
FT-2	6.3	1.2	2 7/8	1 5/8	1 11/16	2 3/8	3/4	3.90
FT-3	2.5	6	3 5/16	1 7/8	2	2 13/16	1	4.50
FT-4	6.3	3	3 5/16	1 7/8	2	2 13/16	1	4.50
FT-5	2.5	10	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-6	5	3	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-7	7.5	3	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-8	6.3	8	4	2 1/2	2 5/8	3 9/16	2 1/2	5.40
FT-10*	24	2	4	2 5/8	2 11/16	3 9/16	2 1/2	5.55
FT-11†	24	1	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.95
FT-12‡	36	1.3	4	2 5/8	2 5/8	3 9/16	2 1/2	5.55
FT-13§	26	.04	2 1/8	1 3/8	1 1/4	1 3/4	1/4	4.20
FT-14§	26	.25	2 7/8	1 5/8	1 11/16	2 3/8	3/4	4.50
FT-15§	48	1	4	2 1/2	2 5/8	3 9/16	2 1/2	6.30

*Or 12 v., 4 amps sec. †Or 12 v., 2 amps sec. ‡Or 18 v., 2.6 amps sec. §Taps on primary to modify sec. nom. voltage −6%, +6% and +12%. **See complete R Series on last UTC page.**

Primary, 115 v. AC, 50/60 cps. Bridge Rectifiers
UTC Type S-77 and S-78 tapped for dual secondary volts. **See following UTC page.**

UTC Type	Volts DC	Amps DC	Case No.	Net Each
S-75	5.2/14	1.2/.4	G-1	$ 6.00
S-76	10/26	4/1.4	G-4	9.00
S-77	14/56	3/1	G-5	10.20
S-78	28/110	9/3	G-9	30.00
S-79	32/120	3/1	G-7	18.00

NEW CAT★ TRANSISTOR IMPEDANCE TYPES

All units in RC-50 case. Frequency range, ±2 db, 50–15,000 cps. Power level 1 watt except CAT-15, 5 watts.

UTC Type	Application	Primary		Secondary Imped., Ohms	Net Each
		Impedance Ohms	Unbal. Ma DC		
CAT-15	Output	48/12 spl.	750*	16 spl./8/4	$8.10
CAT-20	Istg./outp.	500/125 spl.	20	16/4 split	7.80
CAT-25	Isol./outp.	500/125 spl.	20	500/125 spl.	7.80
CAT-30	Input/Istg.	500/125 spl.	20	2K/500 split	7.80
CAT-40	Istg./outp.	10K/2.5K spl.	8	2K/500 split	7.80

*Balanced.

NOW OVER 1200 STOCK ITEMS ARE AVAILABLE FROM UTC: "PIONEERS IN MINIATURIZATION"—THE STANDARD OF RELIABILITY FOR OVER 30 YEARS

MILITARY STANDARD TRANSFORMERS AND INDUCTORS

HERMETICALLY SEALED TO MIL-T-27B SPECIFICATIONS

Made and guaranteed to meet MIL-T-27B by full environmental testing.

FILAMENT, POWER, PLATE TRANSFORMERS

Primary 105/115/125 v., 54/66 cycles. Current ratings are for high voltage secondary DC, choke input filter. For condenser input, reduce by 70%. All units are MIL grade 4, ruggedized; equally usable where grade 1 is specified. Electrostatically shielded.

UTC Type	MS No.	MIL Type TF4RX-	Secondary Rating	MIL Case	Net Each
N-583A	90016-2	01EB002	2.5 v.–3 a.; 1000 WV	EB	$10.20
N-584A	90017-2	01GB003	2.5 v.–10 a.; 1000 WV	GB	14.10
N-585A	90018-2	01FB004	5 v.–3 a.; 1000 WV	FB	11.10
N-586A	90019-2	01HB005	5 v.–10 a.; 1000 WV	HB	15.30
N-587A	90020-2	01FB006	6.3 v.–2 a.; 1000 WV	FB	11.10
N-588A	90021-2	01GB007	6.3 v.–5 a.; 1000 WV	GB	12.90
N-589A	90022-2	01JB008	6.3 v.–10 a.; 1000 WV	JB	17.70
N-590A	90023-2	01KB009	6.3 v.–20 a.; 1000 WV	KB	22.50
N-591A	90024-2	01JB012	2.5 v.–10 a.; 6300 WV	JB	18.00
N-592A	90025-2	01KB013	5 v.–10 a.; 6300 WV	KB	21.00
N-593A	90026-2	03HA001	200–100–0–100–200, 70 ma; 6.3/5 v.–2 a.; 6.3 v.–3 a.	HA	20.70
N-594A	90027-2	03JB002	325–0–325, 70 ma; 6.3/5 v.–2 a.; 6.3 v.–4 a.	JB	22.35
N-595A	90028-2	03KB006	325–0–325, 150 ma; 5 v.–3 a.; 6.3 v.–5 a.	KB	25.35
N-596A	90029-2	03LB003	400–0–400, 175 ma; 5 v.–3 a.; 6.3 v.–8 a.	LB	27.30
N-597A	90030-2	03MB004	450–0–450, 250 ma; 5 v.–3 a.; 6.3 v.–8 a.	MB	33.90
N-598A	90031-2	02KB001	350–0–350, 250 ma	KB	19.80
N-599A	90032-2	02LB002	550–0–550, 250 ma	LB	26.85
N-600A	90036-2	02NB003	800–0–800, 250 ma	NB	37.50

AUDIO TRANSFORMERS

Frequency response 300–10,000 cps, ±2 db. Split 600-ohm units provides for 600 ohms CT and 1500 ohms. Electrostatic shielding provided on W784, W-785 and W-786; W-783 has center-tapped secondary for 90K CT or 22.5K CT. All units in AJ case. Wt., 0.6 lb.

UTC Type	MS No.	MIL Type TF1RX-	*	Primary Imped. Ohms	Primary DC Ma., Unbal.	Sec. Imped. Ohms	Net Each
W-783	90000-1	15AJ001	a	10K CT	10	90K spl.	$15.90
W-784	90001-1	16AJ002	b	600 spl.	....	4/8/16	14.70
W-785	90002-1	10AJ001	c	600 spl.	....	135K CT	14.10
W-786	90003-1	16AJ001	d	600 spl.	....	600 spl.	14.10
W-787	90004-1	13AJ001	e	7.6K/4.8K	40	600 spl.	12.75
W-788	90005-1	13AJ002	f	7.6K/4.8K	40	4/8/16	12.90
W-789	90006-1	13AJ003	g‡	15K CT	10	600 spl.	12.45
W-790	90007-1	13AJ004	g§	24K CT	20†	600 spl.	12.90
W-791	90008-1	13AJ005	g#	60K CT	20†	600 spl.	12.45

*Use: **a**—PP plates to pp grids, 15 dbm level. **b**—Line to VC, 2 watts. **c**—Line to pp grids, 15 dbm. **d**—Line to line, 15 dbm. **e**—Plate to line, 2 watts. **f**—Plate to VC, 2 watts. **g**—PP plates to line. †Balanced. ‡2 watts. §1 watt. #0.5 watt.

INDUCTORS

Two windings for series or parallel connection. Inductance shown for series connection. All but Z-857 are standard MIL case types. Rated 3500 WVDC, unless otherwise noted.

UTC Type	MS No.	MIL Type TF1RX-	Induct. Hy	Ma DC	DCR Ohms	MIL Case	Net Each
Z-848*	90009-1	04FA001	16	80	645	FA	$11.40
Z-849*	90010-1	04GA002	25	80	670	GA	14.10
Z-850*	90011-1	04HA003	40	80	1020	HA	21.30
Z-851†	90013-1	04HA005	16	125	330	HA	16.50
Z-852†	90014-1	04JB006	25	125	460	JB	24.30
Z-853	90037-1	04KA007	40	125	535	KA	29.40
Z-854	75000-2	04LA009‡	16	200	180	LA	31.50
Z-855	75001-2	04MA010‡	25	200	210	MA	36.90
Z-856	75002-2	04NA012‡	16	315	105	NA	43.20
Z-857	75003-2	04YY013‡	25	315	150	YY	75.00

*1000 WVDC. †2000 WVDC. ‡TF4RX- prefix.

★UTC trademark. All product lines or type designations are UTC trademarks.

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY INFORMATION

Amateur and PA Transformers

SPECIAL SERIES★ TRANSFORMERS

UTC Special Series* transformers are designed specifically for amateur and popular priced PA service. Units are finished in a fine, commercial type medium gray enamel. Recessed terminal strip is provided, permitting above-chassis wiring or breadboard type wiring setups in addition to standard chassis wiring. Case sizes are in table below.

G-1–G-4 G-5–G-12

Case	W., In.	D., In.	H., In.	Wt., Lbs.	Case	W., In.	D., In.	H., In.	Wt., Lbs.
G-1	2 13/16	1 3/4	1 7/8	1	G-8	5 3/8	5 3/8	4 5/8	12
G-2	3 3/8	1 15/16	2 5/16	1 1/2	G-9	5 3/8	6 3/4	5 7/8	21
G-3	3 3/4	2 5/32	2 1/2	2	G-10	6 1/8	6 5/8	5 7/8	24
G-4	4 1/8	2 5/16	2 15/16	3	G-11	6 19/32	7 3/8	5 7/8	31
G-5	3 1/8	4 1/2	3 3/4	4 1/2	G-12	7 3/8	9 1/4	10 1/4	52
G-7	4 5/8	5 1/2	4 5/8	8					

INPUT AND DRIVER TRANSFORMERS

UTC Type	Application	Ratio Pri. to Sec.	Level	Case	Net Each
S-1	Plate to grid	1:3	+30 dbm	G-2	$4.80
S-2	Plate to p-p grids	1:4*	+30 dbm	G-2	6.00
S-3	Pl. to 1 or 2 grids	1:4*	+25 dbm	G-1	4.50
S-5	Line to grid, humbkg.	1:16	+30 dbm	G-2	5.10
S-6	Line to grid, compact	1:16	+25 dbm	G-1	4.50
S-8	Driver pl. to p-p	2.66:1, 5:1*	5 w.	G-3	6.60
S-9	Driver p-p to p-p	2.66:1, 3.6:1, 5:1*	20 w.	G-4	8.70
S-10	Driver p-p to p-p	2.25:1*	5 w.	G-3	6.60

MATCHING, OUTPUT AND MODULATION UNITS

UTC Type	Application	Pri. Imped., Ohms	†	Level, Watts	Case	Net Each
S-11	Pl. to line	15K	a	.25	G-2	$5.10
S-12	Line to V.C.	.5K/2K/4K	b	15	G-2	5.40
S-13	Line to V.C.	.5K/2K/4K	b	30	G-4	7.80
S-14	Output	2.5K/4K/7K/10K	c	10	G-2	6.60
S-15	PP output	4K/5K/10K CT	c	12	G-2	7.20
S-16	PP output	3K/6K/9/10K CT	c	30	G-4	8.40
S-17	PP output	3.8K/4.5-5K CT	c	55	G-5	12.00
S-18	Univ. modul.	Any Class B	d	12	G-3	7.20
S-19	Univ. modul.	Any Class B	d	30	G-4	9.30
S-20	Univ. modul.	Any Class B	d	55	G-5	15.00
S-21	Univ. modul.	Any Class B	d	110	G-7	21.00
S-22	Univ. modul.	Any Class B	d	250	G-9	33.00

†Secondary Impedance: **a**—200/500 ohms. **b**—2, 4, 8, 15 ohms. **c**—2, 8, 15, 500 ohms. **d**—Any Class C. *Center tapped.

PLATE AND BIAS TRANSFORMERS

Primary 115 V. 50/60 Cycles

UTC Type	High Voltage	DC Voltages*	DC Ma	Case	Net Each
S-44	575-525-0-525-575	470/430	500	G-9	$25.80
S-45	900-750-0-750-900	750/620	200	G-8	21.00
S-46	1000-750-0-750-1000	825/600	300	G-9	24.00
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300	G-10	33.00
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500	G-11	39.00
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300	G-11	36.00
S-50	3000-2500-0-2500-3000	2625/2175	300	G-12	60.00
S-51	Any bias voltage from 15 to 100 ±6%		200	G-5	12.00
S-52	Any bias voltage from 75 to 400 ±6%		200	G-7	15.60

*Based on two section filter for 200 ma. and 300 ma. units. Single section filter for 500 ma. units, both choke input.

COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 V., 50-60 Cy.

UTC Type	Voltage	DC V.	Rect. Fil.	Filament No. 1	Filament No. 2	Case No.	Net Each
S-39	490-400-0-400-490 175 ma	400/310	5 V-3A	2.5 VCT-6A	6.3 VCT-4A	G-7	$16.50
S-40	525-425-0-425-525 250 ma	400/310	5 V-3A	6.3 VCT-3A	6.3 VCT-3A	G-7	18.00
S-41	600-0-600 200 ma	475	5 V-3A	7.5 V tapped 6.3 V-3A	6.3 VCT-2A	G-7	18.00
S-42	600-525-0-525-600 300 ma	480/400	5 V-6A	7.5 V tapped 6.3 V-3A	6.3 VCT-3A	G-7	19.50

FILTER, SWINGING AND AUDIO CHOKES

Type	Henries	DCMa	Ohms	Insul.	Case	Net Each
S-23*	300	5	5000	1500 v.	G-2	$ 4.50
S-24‡	500	3	6000	1500 v.	G-2	5.10
S-25	30	30	800	1500 v.	G-2	3.90
S-26	12	60	250	1500 v.	G-2	3.90
S-27	25	75	350	1500 v.	G-4	5.10
S-28	20	100	350	1500 v.	G-4	6.30
S-29	6	175	90	1500 v.	G-4	5.10
S-30†	4/20	175	90	1500 v.	G-4	5.10
S-31	6	225	100	2700 v.	G-5	6.90
S-32†	4/20	225	100	2700 v.	G-5	6.90
S-33	8	300	100	4000 v.	G-7	9.30
S-34†	4/20	300	100	4000 v.	G-7	9.60
S-35	8	400	60	5000 v.	G-8	12.00
S-36†	4/20	400	60	5000 v.	G-8	12.00
S-37	8	550	60	6000 v.	G-8	15.00
S-38†	4/20	550	60	6000 v.	G-8	15.00
S-80	50/10 mh	1.75§	.5	500 v.	G-1	3.90
S-81♯	100/8 mh	2.5§	.6	1500 v.	G-3	6.00
	25/2 mh	5§	.15			

*Audio. ‡P.P. Audio C.T. †Swinging. ♯2 windings. §Amps.

FILAMENT TRANSFORMERS

UTC Type	Secondary Volts (Primary Tapped 105, 115 Volts, 50-60 Cy.)	Secondary Current	Insulation	Case No.	Net Each
S-53	2.5 VCT	10 Amp	1500 V	G-3	$ 6.30
S-54	5 VCT	4 Amp	2500 V	G-3	5.70
S-55	6.3 VCT	3 Amp	1500 V	G-3	5.40
S-57	2.5 VCT	10 Amp	10000 V	G-5	9.00
S-58	2.5 VCT	20 Amp	10000 V	G-5	9.90
S-59	5 to 5.25 VCT	13 Amp	5000 V	G-5	9.30
S-60	5 to 5.25 VCT	22 Amp	10000 V	G-7	13.20
S-61	7.5 VCT tapped 6.3 VCT	10 Amp	3000 V	G-5	10.20
S-62	10 VCT	10 Amp	3000 V	G-5	9.30
S-63	14 VCT tapped 12 VCT & 11 VCT	10 Amp	5000 V	G-7	13.20

Type	Filament 1	Filament 2	Filament 3	Case	Net Ea.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	G-5	$10.80
S-67	5 VCT-6A	6.3 VCT-5A	....	G-5	10.20
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	G-5	10.50
S-70‡	6.3 VCT-5A	6.3 VCT-5A	....	G-5	10.20
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	G-7	15.00
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	G-5	11.40

‡Insulation 3000 v.

SEE PREVIOUS UTC PAGE FOR TRANSISTOR TRANSFORMERS

PHOTOFLASH TRANSFORMERS

Standard photoflash transformers that may be used with either standard Amglo type or Sylvania trigger type multiple flash tubes. Circuit details are included with the units.

PF-6

UTC Type PF-1—Primary, 115 v. AC, 50/60 cps. Secondary, for power supply delivering 2,200 v. DC to capacitor up to 100 µf. Units are compound-sealed in G-3 cases, 2 5/32" x 2 3/4" (3 3/4" incl. flange) x 2 1/2" h. Weight, 2 lbs. Net Each.................. **$8.40**

UTC Type PF-3—Trigger transformer for use with above unit, 15K v. peak. Size: 7/8" O.D. x 3" lg. Weight, 2 oz. Net Each..**$6.00**

TRANSISTOR PHOTOFLASH TRANSFORMERS

Miniaturized, lightweight units for use in transistorized photoflash circuits.

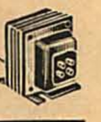
UTC Type PF-5—Primary, 115 v. AC, 50/60 cps or 4 1/2 v. battery switched by PF-6 inverter transformer. Output, 400 v. DC when used in voltage doubler circuit to charge photoflash capacitor (40-watt-second rating). Case, G-1 (see above). Net Each.. **$8.40**

UTC Type PF-6—Inverter transformer for use in transistor inverter circuit with PF-5 step-up transformer and 4.5 v. DC battery. Size, 7/8" dia. x 1 3/16" l. Net Each..............**$5.10**

UTC Type PF-7—Trigger transformer. Shorting .25 µf capacitor, (charged to approx. 225 v. DC) across terminals 1-2 produces 6 kv pulse at terminal 3 for triggering flash tube. Size: 7/8" dia. x 15/16" l. Weight, .5 oz. Net Each..............................**$3.60**

SIGNALLING AND CONTROL TRANSFORMERS

High power transformers, suitable for operating relays, sirens, horns, etc. from 115 v. AC 50–60 cps. Primary, 110–120 v. AC. Secondary, 4, 8, 12, 16, 20, 24 v. Volt-ampere rating is based on the 24 volt secondary voltage, with corresponding reduction on lower voltages. Primary leads U/L Approved. Screw-type binding posts on output.

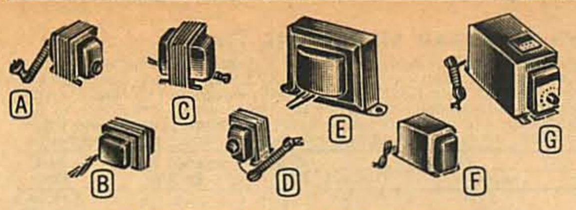


UTC Type	Rating, Watts	Size, Inches L.	Size, Inches W.	Size, Inches H.	Mtg. Size, Inches	Wt., Lbs.	Net Each
SC-3	50	3	3 1/16	3 9/16	1 3/4 x 2 1/4	3	$ 8.40
SC-4	100	3 1/4	3 7/16	4	2 1/8 x 2 1/2	5	9.00
SC-5	250	4	4 5/8	4 3/4	3 5/16 x 3	10	14.40

★ALL PRODUCT LINES OR TYPE DESIGNATIONS ARE UTC TRADEMARKS. SPECIFY BY TRADEMARKS TO ASSURE UTC HIGH QUALITY AND RELIABILITY.

SEE LAST PAGE OF UTC LISTING FOR INDUSTRIAL DISCOUNTS AND MILITARY SPECIFICATIONS

Replacement Transformers



REPLACEMENT TYPE COMPONENTS

All units vacuum sealed. Shells and brackets finished in high luster black enamel. A minimum number of transformers have been developed to cover any requirement in the replacement field.

STEP-DOWN AUTO-TRANSFORMERS (FIG. A)

220/240 to 110/120 v. AC 50/60 cps.
With 6-ft. cord and female receptacle, except R-64.

UTC Type	Rating	Size, Inches L.	W.	H.	Wt., Lbs.	Net Each
R-41	85 watt capacity	3 1/16	2 5/8	3 1/8	4	$ 6.75
R-42	125 watt capacity	3 1/2	3	3 1/2	5	7.65
R-43	175 watt capacity	3 3/4	3 1/4	3 7/8	5 1/2	8.40
R-44	250 watt capacity	4 3/8	3 1/4	3 7/8	6 1/2	11.10
R-45	500 watt capacity	4 5/8	3 7/8	4 5/8	12	12.00
R-46	1200 watt capacity	6 7/8	3 7/8	4 5/8	18	24.00
R-64	2500 watts, no cord	10 1/2	4 3/4	6 3/4	30	57.00

DOUBLE SHELL POWER TRANSFORMERS (FIG. B)

Rectifier filaments 5 volts, 3 amps except R-101, 2 amps.

UTC Type	High V.	DC Ma	Amplifier Filament	Overall Height	Wt., Lbs.	Net Each
R-101	275-0-275	50	6.3 v. CT-2.7A	3″	2 1/2	$ 8.70
R-102	350-0-350	70	6.3 v. CT-3A	3 5/8″	3 1/2	10.20
R-103	350-0-350	90	6.3 v. CT-3.5A	3 15/16″	4 1/2	10.35
R-104	350-0-350	120	6.3 v. CT-5A	3 7/8″	5 1/2	11.10
R-105	385-0-385	160	6.3 v. CT-5A	4 5/16″	7	12.00

VERTICAL SHELL POWER TRANSFORMERS (FIG. C)

Rectifier filaments 5 volts, 3 amps., except R-110, 2 amps.

UTC Type	High V.	DC Ma	Amplifier Filament	Overall Height	Wt., Lbs.	Net Each
R-110	300-0-300	50	6.3 v. CT-2.7A	3 1/4″	2 1/2	$ 8.70
R-111	350-0-350	70	6.3 v. CT-3A	3 1/4″	3 1/2	10.20
R-112	350-0-350	120	6.3 v. CT-5A	4″	5 1/2	11.10
R-113	400-0-400	200	6.3 v. CT-6A	4 5/8″	8	14.10

EXPORT VOLTAGE ADAPTER (FIG. D)

Complete with cord, plug and locking switch selecting operation from 105, 115, 125, 135, 150, 210, 230, 250, v. AC, 42–60 cps. Output voltage 115 v. AC.

UTC Type	Rating, Watts	Size, Inches L.	W.	H.	Mtg. Size, Inches	Wt., Lbs.	Net Each
R-47	85	4 5/8	3	3 1/2	2 1/4 x 2 1/4	4 1/2	$10.20
R-48	150	4 3/4	3 1/4	4	2 1/2 x 2 1/2	5 1/2	11.70

TV VOLTAGE REGULATOR (FIG. D)

With cord, plug and locking switching selecting 115 v. AC, 50–60 cps from 85, 90, 95, 100, 105, 110, 120, 125 v. AC input.

R-49	350	5	3 1/4	4	2 1/2 x 2 3/4	5	$12.00

CHANNEL FRAME FILTER REACTORS (FIG. E)

Inductance shown is at rated ma DC. Test v. rms, 1,500.

UTC Type	Induct. Hys.	Cur. Ma	Res., Ohms	Size, Inches W.	D.	H.	Mtg.	Wt., Lbs.	Net Each
R-55	6	40	300	2 3/8	1 3/8	1 3/8	2	1/2	$1.65
R-14	8	40	250	2 7/8	1 1/2	1 11/16	2 3/8	3/4	1.95
R-15	12	30	450	2 7/8	1 1/2	1 11/16	2 3/8	3/4	1.95
R-16	15	30	630	2 7/8	1 1/2	1 11/16	2 3/8	3/4	1.95
R-17	20	40	850	3 5/16	1 5/8	2	2 13/16	1	2.25
R-18	8	80	250	3 9/32	1 5/8	2	2 13/16	1	2.52
R-19	14	100	450	3 3/4	1 7/8	2 5/16	3 1/8	1 1/2	3.00
R-20	5	200	90	4 1/8	2 1/4	2 5/8	3 9/16	2 1/2	3.60
R-21	15/3	200	90	4 1/8	2 1/4	2 5/8	3 9/16	2 1/2	3.60
R-220	100/8* 25/2*	2.5 a. 5 a.	.6 .16	3 3/4	2	2 5/16	3 1/8	1 1/2	4.20

*Millihenries.

ISOLATION TRANSFORMERS (FIG. F)

Ideal for isolating line noise, AC-DC sets, etc. Excellent electrostatic shielding 1,500 volt breakdown test. Complete with 6′ cord and female receptacle, except UTC Type R-77. Primary, 110-120 v. AC, 50/60 cps. Secondary, 110-120 v., except UTC Type R-97, 220 v. AC primary, 120 v. AC secondary.

UTC Type	Rating, Watts	Size, Inches L.	W.	H.	Mtg. Size, Inches	Wt., Lbs.	Net Each
R-72	40	3 1/8	2 5/8	3 1/8	2 x 1 7/8	4	$ 7.20
R-73	100	3 3/4	3 1/4	3 7/8	2 1/4 x 2 3/8	6	10.50
R-74	250	4 7/8	3 7/8	4 5/8	3 x 3 1/2	12	18.00
R-75	600	7 3/8	3 7/8	4 5/8	3 x 5 7/8	20	24.00
R-76	1200	8 1/2	4 1/2	6 1/8	3 5/8 x 6 5/8	30	57.00
R-77	2500	12	7	9	6 x 11	70	99.00
R-97	250	4 7/8	3 7/8	4 5/8	3 x 3 1/2	12	15.00

LINE VOLTAGE ADJUSTERS WITH METER (FIG. G)

Adjusts abnormal or fluctuating line voltages. Adjust switch so that meter reads at red line and then the correct line voltage for your equipment is provided. These units combine a tapped autoformer, switch and meter in a rugged, compact assembly. Switch is nine-position type and adjusts for line voltages, 60-140 volts on 115 v. output models and 160-240 v. on 230 v. output model. All units are designed for 50/60 cps service and come complete with 6′ cord and plug and output receptacle.

UTC Type	Primary Voltages	Second. Volts	Watts Rating	Size, Inches L.	W.	H.	Wt., Lbs.	Net Each
R-78	†	115	150	7	4	4 3/4	6	$17.70
R-79	†	115	300	7	4	4 3/4	9	18.90
R-80	†	115	600	10 1/4	4	4 3/4	13	22.80
R-81	†	115	1200	10 1/4	4	4 3/4	21	33.00
R-86	‡	230	1200	10 1/4	4	4 3/4	21	33.00

†60, 70, 80, 90, 100, 110, 120, 130, 140 volts. ‡160, 170, 180, 190, 200, 210, 220, 230, 240 volts.

MILITARY DESIGNATIONS

MIL-T-27B INDUCTORS AND TRANSFORMERS

TF	4	R	X	01	FA
A	B	C	D	E	F

MIL-T-21038B PULSE TRANSFORMERS

TP	6	R	X	1100	B	C
A	B	C	D	G	H	I

A **Component:** TF indicates all MIL-T-27( ) transformers or inductors. TP indicates all MIL-T-21038B pulse transformers.

B **Grade:** Refers to case material and environmental capability. MIL-T-27B, Grade 4 is metal-cased with max. reliability; resistant to shock, vibration and thermal shock. Grade 5 same as Grade 4 except encapsulated or molded. MIL-T-21038B, Grade 6 same as Grade 4, MIL-T-27B plus use at high altitudes if required. Grade 7 is encapsulated or molded version of Grade 6.

C **Class:** Indicative of max. operating temperature (ambient plus temperature rise). R is 105° C. S is 130° C.

D **Life Expectancy:** Designers estimate of mean anticipated life. X indicates 10,000 hours life estimated.

E **Family:** Two-digit number code-listed in specification, representing each application or category of transformer and inductor.

F **Case Size and Mounting:** Two-letter code listed in specifications. See table of sizes, below. YY is non-standard metal case. ZZ is encapsulated or molded.

G **Turns Ratio:** Four-digit code indicates number of windings and their ratios; e.g., 1110 is 1:1:1.

H **Case Style:** Single letter code for fixed case styles; e.g., A for radial leads and C for terminations at one end.

I **Case Size:** Single letter code for fixed envelope dimension, as given in individual listings. Z indicates other sizes.

MIL-T-27B CASE SIZES

MIL Case	Size, Inches: Dimension A	B	C	D	E	Mounting Studs
AF	3/4	3/4	1 1/8	Diag.	9/16	4-40 x 3/8
AG	1	1	1 3/8	Diag.	3/4	4-40 x 3/8
AH	1 5/16	1 5/16	1 3/4	Diag.	1 1/4	6-32 x 3/8
AJ	1 5/8	1 5/8	2 3/8	1 3/16	1 5/16	6-32 x 3/8
EA	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	6-32 x 3/8
EB	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	6-32 x 3/8
FA	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	6-32 x 3/8
FB	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32 x 3/8
GA	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	6-32 x 3/8
GB	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32 x 3/8
HA	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32 x 3/8
HB	3 1/16	2 5/8	3 3/16	2 19/64	1 55/64	8-32 x 3/8
JA	3 9/16	3 1/16	4 7/8	2 5/8	2 1/8	8-32 x 3/8
JB	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32 x 3/8
KA	3 15/16	3 3/8	5 1/4	3	2 7/16	10-32 x 1/2
KB	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32 x 1/2
LA	4 5/16	3 11/16	5 9/16	3 5/16	2 11/16	10-32 x 1/2
LB	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32 x 1/2
MA	4 11/16	4	6	3 11/16	3	1/4-20 x 5/8
MB	4 11/16	4	4 15/16	3 11/16	3	1/4-20 x 5/8
NA	5 1/16	4 5/16	6 13/16	4 1/16	3 5/16	1/4-20 x 5/8
NB	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4-20 x 5/8
OA	5 1/2	4 1/2	6 3/4	3 3/4	3	1/4-20 x 5/8

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INDUSTRIAL DISCOUNTS

Applicable to any UTC products listed in this catalog.

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