SO-P, PC-SO
Miniature Audio Transformers and Inductors

Line	Type No. PC-SO	Type No. SO-P	MIL Part No. for Type SO-P	Input Winding: E.T. Product Millivolt Sec.	Input Winding: Unbal. DC ma in Winding	Input-Matching Impedance Primary (Ohms)	Output-Matching Impedance Secondary (Ohms)	Maximum Level: DBM	Maximum Level: M.W.	Series Connected DCR ± 25% Ohms: In Pri.	Series Connected DCR ± 25% Ohms: Out Sec.	Turns Ratio ± 3%: Pri.	Turns Ratio ± 3%: Sec.	Schem. PC/P	Pins Arrange PC/P
				Input Winding		Frequency Response 200 Hz - 20KHz — Working Voltage: 175 Peak									
1	**9**	**9**	M27/165-06	1.5	0	3.2	500 CT	+24	250	0.35	15	1	12.5	13/7	E/C
3	**10**	**10**	M27/165-09	4.6	60	8 16	2000 CT 4000CT	+24	250	2	290	1	15.9	13/7	E/C
4	**14**	**14**	M27/165-01	5.2	10	32 split 40 split	80 CT 100CT	+24	250	3.2	4.9	1	1.58	4/9	E/D
5	**13**	**13**	M27/165-03	5.8	2.5	40 split 50 split	400 CT 500CT	+24	250	4.5	20	1	3.16	4	E
6	**4**	**4**	M27/165-16	3.7	24	50	30K	+23	200	3.8	1850	1	24.5	8	E
7	**6**	**6**	M27/165-18	3.2	20	60	100K	+23	200	3.7	3400	1	40	8	E
8	**14**	**14**	M27/165-01	8.3	16	80 CT 100 CT	32 split 40 split	+24	250	4.9	3.2	1.58	1	4/9	E/D
9	**12**	**12**	M27/165-04	10	14	120 split 150 split	400 CT 500 CT	+24	250	12.6	20	1	1.82	4	E
10	**1**	**1**	M27/165-02	1.2	0	200 50	250K 62.5K	+10	10	16	2500	1	35	8	E
11	**3**	**3**	M27/165-11	10	21 10	200 500	10K 25K	+23	200	30	1225	1	7.1	8/1	E/A
13	**13**	**13**	M27/165-03	18	8	400 CT 500 CT	40 split 50 split	+24	250	20	4.5	3.16	1	4	E
14	**12**	**12**	M27/165-04	18	8	400 CT 500 CT	120 split 150 split	+24	250	20	12.5	1.82	1	4	E
15	**11**	**11**	M27/165-05	18	8	400 CT 500 CT	400 split 500 split	+24	250	20	45	1	1	4	E
16	**9**	**9**	M27/165-06	19	0	500 CT	3.2	+24	250	15	.35	12.5	1	13/7	E/C
17	**15**	**15**	M27/165-07	23	6	600 CT	600 split	+24	250	35	60	1	1	4/9	E/D
18	**22**	**22**	TF5R21ZZ	28	5	900 split	600 split	+24	250	72	44	1.22	1	6	E
19	**20**	**20**	M27/165-08	32	4	600 split†	10K CT	+23	200	80	1050	1	4.08	5	E
20	**18**	**18**	M27/165-17	23	9	600 split	50K CT	+24	250	63	2400	1	9.1	4/9	E/D
21	**7**	**7**	M27/165-15	9.2	2.5	800 1200	20K 30K	+23	200	32	450	1	5	8/1	E/A
22	**22**	**22**	TF5R21ZZ	23	6	600 split	900 split	+24	250	44	72	1	1.22	6	E
23	**10**	**10**	M27/165-09	7.4	4 2	2K CT 4K CT	8 16	+24	250	290	2	15.9	1	13/7	E/C
24	**8**	**8**	M27/165-12	15	2.2	2K CT	10K	+23	200	40	1000	1	2.23	2/3	E/B
25	**16**	**16**	M27/165-10	46	4	2500 CT	2500 split	+24	250	140	300	1	1	4	E
26	**3**	**3**	M27/165-11	74	3 1.5	10K 25K	200 500	+23	200	1225	30	7.1	1	8/1	E/A
27	**20**	**20**	M27/165-08	133	1	10K CT†	600 split	+23	200	1050	80	4.08	1	6	E
28	**8**	**8**	M27/165-12	34	1	10K	2000 CT	+23	200	1000	40	2.23	1	2/3	E/B
29	**21**	**21**	M27/165-13	111	1	10K CT† 12K CT†	10K split 12K split	+23	200	855	1080	1	1	5	E
30	**2**	**2**	M27/165-14	10	.25	10K	90K	+20	100	215	1850	1	3	8/1	E/A
31	**7**	**7**	M27/165-15	46	.5	20K 30K	800 1200	+23	200	450	32	5	1	8/1	E/A
32	**4**	**4**	M27/165-16	91	1	30K	50	+23	200	1850	3.8	24.5	1	8	E
33	**18**	**18**	M27/165-17	100	1	50K CT	600 split	+24	250	2400	63	9.1	1	4/9	E/D
34	**2**	**2**	M27/165-14	29	0	90K	10K	+20	100	1850	215	3	1	8/1	E/A
35	**6**	**6**	M27/165-18	130	.5	100K	60	+23	200	3400	3.7	40	1	8	E
36	**1**	**1**	M27/165-02	44	0	250K 62.5K	200 50	+10	10	2500	16	35	1	8	E

† Electrostatic Shield

Key to SO Line

SO-Type	Line Number
1	10-36
2	30-34
3	11-26
4	6-32
5	37-38
6	7-35
7	21-31
8	24-28
9	1-16
10	3-23
11	15
12	9-14
13	5-13
14	4-8
15	17
16	25
18	20-33
20	19-27
21	29
22	18-22

INDUCTORS

37	**SO-5**	Inductor, 50 Hys @ 1 maDC, 2675 ohms DC res.		
38	**SO-5P** **PC-S05**	Split Series: 40 Hys @ 1 maDC, 20 Hys @ 2 maDC, 2675 ohms Inductor Parallel: 10 Hys @ 2 maDC, 5 Hys @ 4 maDC, 670 ohms	11/10	E/A

SHIELDS Drawn Hipermalloy Shield provides 20 db Shielding

PC-SO-SH	0.968" Sq x 0.625" H
SO-P-SH	1.062" L x 0.812" W x 0.734" H

United Transformer Company/OPT • 300 Red School Lane, Phillipsburg, NJ 08865 • (201) 454-2600 • FAX (201) 454-3172

SO-P, PC-SO
Miniature Audio Transformers and Inductors

TYPES

PC-SO — Printed circuit board mounting open frame

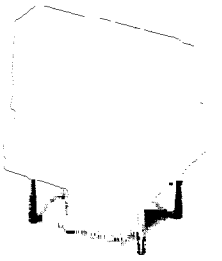
SO-P — Hermetically sealed type to complete MIL-T-27 Specs, Grade 5, Class R.

NOTES

ON PERFORMANCE CHARACTERISTICS

- To present the widest range of application, matching impedance values are listed in order of increasing impedance value without regard to the traditional designation of primary or secondary winding.
- The primary and secondary winding can be used arbitrarily as the input or output.
- Impedance values written one above the other indicate a range of matching impedances over which the parts will give satisfactory performance as long as the impedance ratio is maintained.
- Impedance values separated by a slash indicate the series and parallel connected impedance value of the windings.
- PC-SO Types have terminal arrangements that permit the connection of series or parallel windings by bridging adjacent terminals (see Fig. 12). This eliminates unwanted cross overs on the PC board when split is available.

(E.T. is the maximum voltage, time product for a single pulse applied to the winding.)



PIN ARRANGEMENT (Pins not used are removed. These are indicated by "x.")

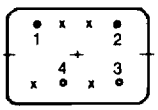


Fig. A

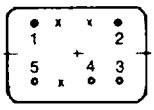


Fig. B

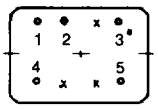


Fig. C

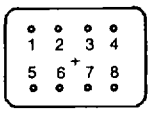


Fig. D

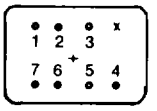


Fig E†

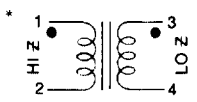


Fig. 1

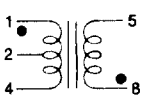


Fig. 2

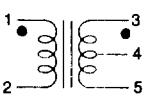


Fig. 3

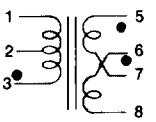


Fig. 4

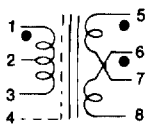


Fig. 5

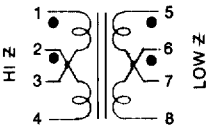


Fig. 6

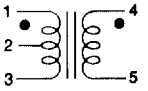


Fig. 7

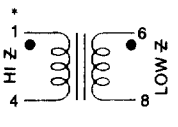


Fig. 8

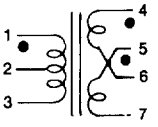


Fig. 9

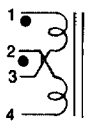


Fig. 10

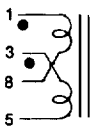


Fig. 11

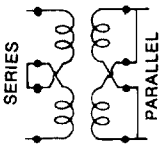


Fig. 12

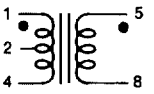
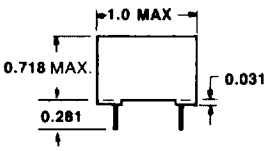


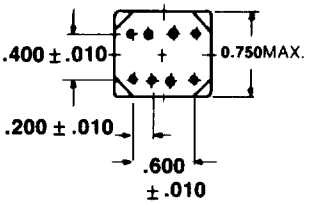
Fig. 13

† Pin numbers not shown in schematic will be missing.

* On PC-SO-2 and SO-2P, Hi Z and Lo Z are reversed.

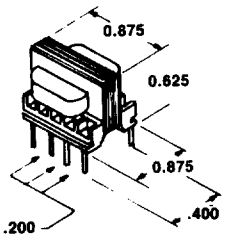
SO-P





.040 DIA. PIN
UP TO 8
.200 APART

PC-SO



.040 DIA. PINS
AS REQUIRED
UP TO 8