

# Audio Transformers:

**2 Ohm to 80K Ohm; 20Hz to 25KHz; 3 watt at 1KHz**

## **SURFACE MOUNT**

PICO surface mount units utilize materials and methods to withstand extreme temperatures of vapor phase, I.R., and other reflow procedures without degradation of electrical or mechanical characteristics.

### **Specifications**

- **MIL-PRF-27:** All units manufactured to MIL-PRF-27, Grade 5, Class S.
- **FREQUENCY RESPONSE:**  $\pm 3$ db, 20 Hz-25 KHz at 1.0 Milliwatt.
- **MAXIMUM DISTORTION:** 5% with Rated Power Level at 1 KHz and 300 Hz. 10% Distortion at 20 Hz.
- **DIELECTRIC STRENGTH:** All units tested at 200 V RMS.
- **INSULATION RESISTANCE:** Greater than 10,000 Megohms at 300 V DC.
- **WEIGHT:** 28 Grams
- **OPERATING TEMPERATURE:** -55° C to +130° C
- **TERMINALS:** Solderability per MIL-STD-202, Method 208.
- **THERMAL SHOCK:** 25 Cycles, Method 107, MIL-STD-202, Test Condition -55° C to +130° C.
- **MOISTURE SENSITIVITY LEVEL:** MSL3



84003	20 ct	8 ct	2	3.0	2.0	.006	22	1.6	.8	.2	1.58:1	3.16:1	69.58
84005	20 ct	20 ct	5	3.0	2.0	.006	22	1.6	2	.5	1:1	2:1	69.58
84010	32 ct	32 ct	8	3.0	2.0	.006	17.5	2.56	3.2	.8	1:1	2:1	69.58
84015	40 ct	40 ct	10	3.0	2.0	.006	16	3.2	4	1	1:1	2:1	69.58
84018	48 ct	16 ct	4	3.0	2.0	.006	14.5	3.84	1.6	.4	1.73:1	3.46:1	69.58
84020	50 ct	50 ct	12.5	3.0	2.0	.006	14	4	5	1.25	1:1	2:1	69.58
84025	80 ct	32 ct	8	3.0	2.0	.006	11	6.4	3.2	.8	1.58:1	3.16:1	69.58
84028	100 ct	40 ct	10	3.0	2.0	.006	10	8	4	1	1.58:1	3.16:1	69.58
84030	100 ct	100 ct	25	3.0	2.0	.006	10	8	10	2.5	1:1	2:1	69.58
84035	120 ct	12.8 ct	3.2	3.0	2.0	.006	9	9.6	1.3	.32	3.06:1	26.12:1	69.58

Pico Part Number	Prim Imped Ohms	Secondary Impedance Ohms Split Windings		Power Watts			Primary Unbal DC Current ma	Prim DC Resist Ohms	Secondary DC Resistance Ohms		Turns Ratio Prime/Sec		Pico Price 1-9 *** (US \$)
		SER	PAR	1KHz and higher	300 Hz and higher	75 Hz and higher			SER CONN	PAR CONN	SEC SER CONN	SEC PAR CONN	
84040	120 ct	60 ct	15	3.0	2.0	.006	9	9.6	6	1.5	1.41:1	2.83:1	69.58
84045	120 ct	120 ct	30	3.0	2.0	.006	9	9.6	12	3	1:1	2:1	69.58
84050	150 ct	12 ct	3	3.0	2.0	.006	8	12	1.2	.3	3.54:1	7.08:1	69.58
84055	150 ct	50 ct	12.5	3.0	2.0	.006	8	12	5	1.25	1.73:1	3.46:1	69.58
84060	150 ct	100 ct	25	3.0	2.0	.006	8	12	10	2.5	1.22:1	2.44:1	69.58
84065	150 ct	150 ct	37.5	3.0	2.0	.006	8	12	15	3.75	1:1	2:1	69.58
84070	150 ct	600 ct	150	3.0	2.0	.006	8	12	60	15	1:2	1:1	69.58
84075	200 ct	200 ct	50	3.0	2.0	.006	7	16	20	5	1:1	2:1	69.58
84080	300 ct	12 ct	3	3.0	2.0	.006	5.5	24	1.2	.3	5:1	10:1	69.58
84085	300 ct	50 ct	12.5	3.0	2.0	.006	5.5	24	5	1.25	2.45:1	4.9:1	69.58
84090	300 ct	150 ct	37.5	3.0	2.0	.006	5.5	24	15	3.75	1.41:1	2.83:1	69.58
84095	300 ct	300 ct	75	3.0	2.0	.006	5.5	24	30	7.5	1:1	2:1	69.58
84100	300 ct	600 ct	150	3.0	2.0	.006	5.5	24	60	15	1:1.41	1.41:1	69.58
84105	320 ct	12.8 ct	3.2	3.0	2.0	.006	5.5	25.6	1.3	.32	5:1	10:1	69.58
84110	400 ct	40 ct	10	3.0	2.0	.006	5	32	4	1	3.16:1	6.32:1	69.58
84115	400 ct	120 ct	30	3.0	2.0	.006	5	32	12	3	1.83:1	3.65:1	69.58
84120	400 ct	200 ct	50	3.0	2.0	.006	5	32	20	5	1.41:1	2.83:1	69.58
84125	400 ct	400 ct	100	3.0	2.0	.006	5	32	40	10	1:1	2:1	69.58
84130	400 ct	1000 ct	250	3.0	2.0	.006	5	32	100	25	1:1.58	1.26:1	69.58
84135	400 ct	2000 ct	500	3.0	2.0	.006	5	32	200	50	1:2.24	1:1.12	69.58

84140	400 ct	4000 ct	1000	3.0	2.0	.006	5	32	400	100	1:3.16	1:1.58	69.58
84142	500 ct	12.8 ct	3.2	3.0	2.0	.006	4.5	40	1.3	.32	6.25:1	12.5:1	69.58
84144	500 ct	16 ct	4	3.0	2.0	.006	4.5	40	1.6	.4	5.6:1	11.2:1	69.58
84145	500 ct	50 ct	12.5	3.0	2.0	.006	4.5	40	5	1.25	3.16:1	6.32:1	69.58
84147	500 ct	150 ct	37.5	3.0	2.0	.006	4.5	40	15	3.75	1.83:1	3.65:1	69.58
84150	500 ct	500 ct	125	3.0	2.0	.006	4.5	40	50	12.5	1:1	2:1	69.58
84155	*500 ct	500 ct	-	3.0	2.0	.006	4.5	40	50	-	1:1	-	72.51
84160	500 ct	600 ct	150	3.0	2.0	.006	4.5	40	60	15	1:1.1	1.83:1	69.58
84165	600 ct	12.8 ct	3.2	3.0	2.0	.006	4	48	1.3	.32	6.85:1	13.7:1	69.58
84167	600 ct	30 ct	7.5	3.0	2.0	.006	4	48	3	.75	4.47:1	8.94:1	69.58
84170	600 ct	48 ct	12	3.0	2.0	.006	4	48	4.8	1.2	3.54:1	7.07:1	69.58
84175	600 ct	200 ct	50	3.0	2.0	.006	4	48	20	5	1.73:1	3.46:1	69.58
84180**	600 ct	600 ct	150	3.0	2.0	.006	4	48	60	15	1:1	2:1	69.58
84185**	*600 ct	600 ct	-	3.0	2.0	.006	4	48	60	-	1:1	-	72.51
84186**	*600 ct	900 ct	-	3.0	2.0	.006	4	48	90	-	1:1.22	-	72.51
84187**	600 ct	1200 ct	300	3.0	2.0	.006	4	48	120	30	1:1.41	1.41:1	69.58
84190	640 ct	12.8 ct	3.2	3.0	2.0	.006	4	51	1.3	.32	7.07:1	14.14:1	69.58
84195	700 ct	100 ct	25	3.0	2.0	.006	3.5	56	10	2.5	2.65:1	5.29:1	69.58
84200	800 ct	12.8 ct	3.2	3.0	2.0	.006	3.5	64	1.3	.32	7.91:1	15.8:1	69.58
84205	800 ct	48 ct	12	3.0	2.0	.006	3.5	64	4.8	1.2	4.08:1	8.16:1	69.58
84210	800 ct	800 ct	200	3.0	2.0	.006	3.5	64	80	20	1:1	2:1	69.58
84215	900 ct	600 ct	150	3.0	2.0	.006	3	72	60	15	1.22:1	2.45:1	69.58
84217**	*900 ct	900 ct	-	3.0	2.0	.006	3	72	90	-	1:1	-	72.51
84220	1000 ct	12 ct	3	3.0	2.0	.006	3	80	1.2	.3	9.13:1	18.26:1	69.58
84225	1000 ct	50 ct	12.5	3.0	2.0	.006	3	80	5	1.25	4.47:1	8.94:1	69.58
84230	1000 ct	1000 ct	250	3.0	2.0	.006	3	80	100	25	1:1	2:1	69.58
84235	1060 ct	12.8 ct	3.2	3.0	2.0	.006	3	85	1.3	.32	9.1:1	18.2:1	69.58
84240	1200 ct	12.8 ct	3.2	3.0	2.0	.006	3	96	1.3	.32	9.68:1	19.4:1	69.58
84245	1200 ct	500 ct	125	3.0	2.0	.006	3	96	50	12.5	1.55:1	3.1:1	69.58
84250	1200 ct	1200 ct	300	3.0	2.0	.006	3	96	120	30	1:1	2:1	69.58

Pico Part Number	Prim Imped Ohms	Secondary Impedance Ohms Split Windings		Power Watts			Primary Unbal DC Current ma	Prim DC Resist Ohms	Secondary DC Resistance Ohms		Turns Ratio Prime/Sec		Pico Price 1-9 *** (US \$)
		SER	PAR	1KHz and higher	300 Hz and higher	75 Hz and higher			SER CONN	PAR CONN	SEC SER CONN	SEC PAR CONN	

84255	*1200 ct	1200 ct	-	3.0	2.0	.006	3	96	120	-	1:1	-	72.51
84260	1500 ct	12 ct	3	3.0	2.0	.006	2.5	120	1.2	.3	11.18:1	22.36:1	69.58
84265	1500 ct	500 ct	125	3.0	2.0	.006	2.5	120	50	12.5	1.73:1	3.46:1	69.58
84270	*1500 ct	600 ct	-	3.0	2.0	.006	2.5	120	60	-	1.58:1	-	72.51
84275	*1500 ct	1500 ct	-	3.0	2.0	.006	2.5	120	150	-	1:1	-	72.51
84280	1600 ct	12.8 ct	3.2	3.0	2.0	.006	2.5	128	1.3	.32	11.18:1	22.36:1	69.58
84283	2000 ct	8 ct	2	3.0	2.0	.006	2.2	160	.8	.2	15.8:1	31.6:1	69.58
84285	2000 ct	2000 ct	500	3.0	2.0	.006	2.2	160	200	50	1:1	2:1	69.58
84290	*2000 ct	2000 ct	-	3.0	2.0	.006	2.2	160	200	-	1:1	-	72.51
84295	2000 ct	8000 ct	2000	3.0	2.0	.006	2.2	160	800	200	1:2	1:1	69.58
84297	2500 ct	2500 ct	625	3.0	2.0	.006	2	200	250	63	1:1	2:1	69.58
84300	3000 ct	3000 ct	750	3.0	2.0	.006	1.8	240	300	75	1:1	2:1	69.58
84305	*3000 ct	3000 ct	-	3.0	2.0	.006	1.8	240	300	-	1:1	-	69.58
84310	3600 ct	3600 ct	900	2.7	2.0	.006	1.7	288	360	90	1:1	2:1	69.58
84312	4000 ct	16 ct	4	2.5	2.0	.006	1.6	320	1.6	.4	15.8:1	31.6:1	69.58
84314**	4000 ct	600 ct	150	2.5	2.0	.006	1.6	320	60	15	2.58:1	5.16:1	69.58
84315	4000 ct	1000 ct	250	2.5	2.0	.006	1.6	320	100	25	2:1	4:1	69.58
84320	*4000 ct	8000 ct	-	2.5	2.0	.006	1.6	320	800	-	1:1.41	-	72.51
84325	5000 ct	500 ct	125	2.0	2.0	.006	1.4	400	50	12.5	3.16:1	6.32:1	69.58
84330	5000 ct	5000 ct	1250	2.0	2.0	.006	1.4	400	500	125	1:1	2:1	69.58
84335	7500 ct	50 ct	12.5	1.3	1.3	.006	1.2	600	5	1.25	12.25:1	24.5:1	77.17
84340	7500 ct	100 ct	25	1.3	1.3	.006	1.2	600	10	2.5	8.66:1	17.32:1	77.17
84345	7500 ct	600 ct	150	1.3	1.3	.006	1.2	600	60	15	3.54:1	7.07:1	77.17
84350	7500 ct	2500 ct	625	1.3	1.3	.006	1.2	600	250	63	1.73:1	3.46:1	77.17
84355	*7500 ct	7500 ct	-	1.3	1.3	.006	1.2	600	750	-	1:1	-	82.73
84360	8000 ct	12.8 ct	3.2	1.2	1.2	.006	1.1	640	1.3	.32	25:1	50:1	77.17
84365	8000 ct	1000 ct	250	1.2	1.2	.006	1.1	640	100	25	2.83:1	5.66:1	77.17
84370	*8000 ct	1200 ct	-	1.2	1.2	.006	1.1	640	120	-	2.58:1	-	82.73
84375	*9000 ct	9000 ct	-	1.1	1.1	.006	1.1	720	900	-	1:1	-	82.73
84380	10,000 ct	12.8 ct	3.2	1.0	1.0	.006	1	800	1.3	.32	28:1	56:1	77.17
84385	10,000 ct	16 ct	4	1.0	1.0	.006	1	800	1.6	.4	25:1	50:1	77.17
84390	10,000 ct	100 ct	25	1.0	1.0	.006	1	800	10	2.5	10:1	20:1	77.17
84395	10,000 ct	200 ct	50	1.0	1.0	.006	1	800	20	5	7.07:1	14.14:1	77.17
84400	10,000 ct	500 ct	125	1.0	1.0	.006	1	800	50	12.5	4.47:1	8.94:1	77.17
84405	10,000 ct	600 ct	150	1.0	1.0	.006	1	800	60	15	4.08:1	8.16:1	77.17
84410	10,000 ct	1000 ct	250	1.0	1.0	.006	1	800	100	25	3.16:1	6.32:1	77.17
84415	10,000 ct	1200 ct	300	1.0	1.0	.006	1	800	120	30	2.89:1	5.77:1	77.17
84420	10,000 ct	1500 ct	375	1.0	1.0	.006	1	800	150	38	2.58:1	5.16:1	77.17
84425	10,000 ct	2000 ct	500	1.0	1.0	.006	1	800	200	50	2.24:1	4.47:1	77.17
84430	10,000 ct	5000 ct	1250	1.0	1.0	.006	1	800	500	125	1.41:1	2.83:1	77.17
84435	10,000 ct	7500 ct	1875	1.0	1.0	.006	1	800	750	188	1.16:1	2.31:1	77.17
84440	10,000 ct	10,000 ct	2500	1.0	1.0	.006	1	800	1000	250	1:1	2:1	77.17
84445	*10,000 ct	10,000 ct	-	1.0	1.0	.006	1	800	1000	-	1:1	-	82.73

84450	15,000 ct	400 ct	100	.66	.66	.006	.8	1200	40	10	6.12:1	12.25:1	77.17
84452	15,000 ct	500 ct	125	.66	.66	.006	.8	1200	50	12.5	5.48:1	10.95:1	77.17
84455	15,000 ct	600 ct	150	.66	.66	.006	.8	1200	60	15	5:1	10:1	77.17
84460	15,000 ct	10,000 ct	2500	.66	.66	.006	.8	1200	1000	250	1.22:1	2.45:1	77.17
84465	*15,000 ct	15,000 ct	-	.66	.66	.006	.8	1200	1500	-	1:1	-	82.73
84470	15,000 ct	15,000 ct	3750	.66	.66	.006	.8	1200	1500	375	1:1	2:1	77.17
84475	16,000 ct	1000 ct	250	.62	.62	.006	.8	1280	100	25	4:1	8:1	77.17
84480	20,000 ct	500 ct	125	.5	.5	.006	.7	1600	50	12.5	6.32:1	12.6:1	82.73
84485	20,000 ct	600 ct	150	.5	.5	.006	.7	1600	60	15	5.77:1	11.55:1	82.73
84490	20,000 ct	800 ct	200	.5	.5	.006	.7	1600	80	20	5:1	10:1	82.73

Pico Part Number	Prim Imped Ohms	Secondary Impedance Ohms Split Windings		Power Watts			Primary Unbal DC Current ma	Prim DC Resist Ohms	Secondary DC Resistance Ohms		Turns Ratio Prime/Sec		Pico Price 1-9 *** (US \$)
		SER	PAR	1KHz and higher	300 Hz and higher	75 Hz and higher			SER CONN	PAR CONN	SEC SER CONN	SEC PAR CONN	
84495	20,000 ct	1000 ct	250	.5	.5	.006	.7	1600	100	25	4.47:1	8.94:1	82.73
84500	20,000 ct	5000 ct	1250	.5	.5	.006	.7	1600	500	125	2:1	4:1	82.73
84505	20,000 ct	10,000 ct	2500	.5	.5	.006	.7	1600	1000	250	1.41:1	2.83:1	82.73
84510	*20,000 ct	20,000 ct	-	.5	.5	.006	.7	1600	2000	-	1:1	-	85.96
84515	25,000 ct	500 ct	125	.4	.4	.006	.6	2000	50	12.5	7.07:1	14.14:1	82.73
84520	25,000 ct	1000 ct	250	.4	.4	.006	.6	2000	100	25	5:1	10:1	82.73
84525	30,000 ct	50 ct	12.5	.33	.33	.006	.6	2400	5	1.25	24.5:1	49:1	85.96
84530	30,000 ct	1200 ct	300	.33	.33	.006	.6	2400	120	30	5:1	10:1	85.96
84532	30,000 ct	500 ct	125	.33	.33	.006	.6	2400	50	12.5	7.7:1	15.5:1	85.96
84534	30,000 ct	200 ct	50	.33	.33	.006	.6	2400	20	5	12.2:1	24.5:1	85.96
84535	30,000 ct	5000 ct	1250	.33	.33	.006	.6	2400	500	125	2.45:1	4.9:1	85.96
84540	30,000 ct	10,000 ct	2500	.33	.33	.006	.6	2400	1000	250	1.73:1	3.46:1	85.96
84545	*30,000 ct	30,000 ct	-	.33	.33	.006	.6	2400	3000	-	1:1	-	92.19
84550	40,000 ct	400 ct	100	.25	.25	.006	.5	3200	40	10	10:1	20:1	92.19
84555	40,000 ct	2000 ct	500	.25	.25	.006	.5	3200	200	50	4.47:1	8.94:1	92.19
84560	40,000 ct	4000 ct	1000	.25	.25	.006	.5	3200	400	100	3.16:1	6.32:1	92.19
84565	40,000 ct	20,000 ct	5000	.25	.25	.006	.5	3200	2000	500	1.41:1	2.83:1	92.19
84570	*40,000 ct	40,000 ct	-	.25	.25	.006	.5	3200	4000	-	1:1	-	102.80
84575	50,000 ct	200 ct	50	.2	.2	.006	.4	4000	20	5	15.8:1	31.6:1	102.80
84577	50,000 ct	500 ct	125	.2	.2	.006	.4	4000	50	12.5	10:1	20:1	102.80
84578	50,000 ct	600 ct	150	.2	.2	.006	.4	4000	60	15	9.13:1	18.26:1	102.80
84579	50,000 ct	50,000 ct	12,500	.2	.2	.006	.4	4000	5000	1250	1:1	2:1	102.82
84580	60,000 ct	15,000 ct	3750	.16	.16	.006	.4	4800	1500	375	2:1	4:1	111.02
84585	62,500 ct	50 ct	12.5	.16	.16	.006	.4	5000	5	1.25	35.4:1	70.7:1	111.02
84587	80,000 ct	15,000 ct	3750	.12	.12	.006	.3	6400	1500	375	2.3:1	4.6:1	111.02

\*Includes electrostatic shield

\*\*Miniaturized telephoned coupling application

\*\*\*Discount Prices:

- 1-9 Net;
- 10-24 less 10%;
- 25-49 less 16%;
- 50-99 less 23%;
- 100-499 less 30%

### **Features**

- Extreme resistance to thermal shock.
- Ultra miniature size.
- PICO is approved QPL source (MIL-PRF-27).
- Magnetic shields available.
- Electrostatic shielding can be added.
- Variation of standard designs available.
- Primary and secondary windings can be used either as input or output.
- Every unit in this catalog can be made with a 300 thermal cycle guarantee using PICO's special SR construction. Contact factory for details.

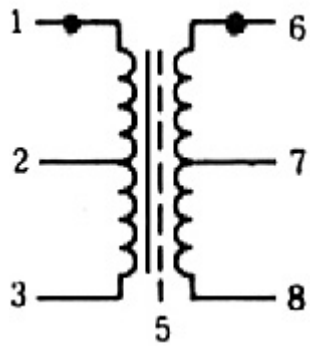
Ordering Instructions:

- No minimum.

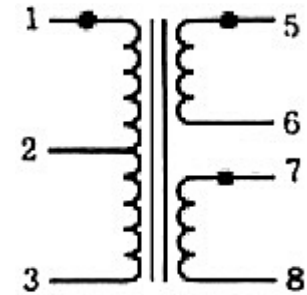
Net 30 days F.O.B. Pelham, NY

**Delivery--stock to one week for sample orders.**

Schematics  
for Transformers  
with Electrostatic Shield

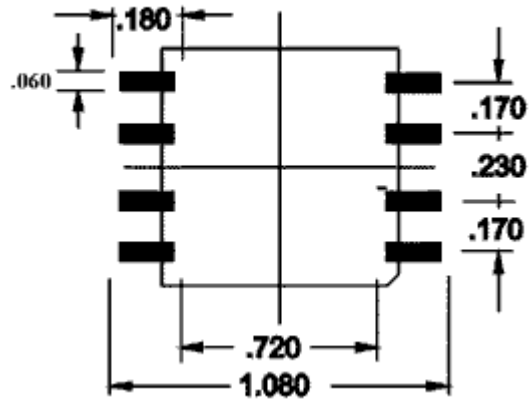


Schematics  
for Transformers  
with Split Secondaries



[Click Here for Thru Hole Version of 84000 Series](#)

### RECOMMENDED LAND PATTERN DIMENSIONS PICO 84000 Series



For immediate engineering assistance or to place an order:  
**Call Toll Free: 800-431-1064**

## **PICO Electronics, Inc.**

143 Sparks Ave. Pelham, NY 10803-1810  
Tel: 914-738-1400 or Fax: 914-738-8225

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