

R · 82000 & CSR Series

2-135kΩ, 75-30kHz, 1.5W Max. @ 1kHz+ Audio Transformer

PICO
Electronics, Inc.

PRODUCT OVERVIEW

The R and 82000 & CSR series are ultra-miniature transformers in an encapsulated package with design layouts as through-hole or surface mount types. They can operate over a wide temperature range of -55°C to +130°C. Our proprietary materials and methods allow extreme temperatures of vapor phase, IR or other reflow procedures without degrading the high reliability of their physical form and electrical performance.

Typical applications:

- Sensors
- Radars
- Avionic flight controls
- Airborne systems
- Naval electronics
- Military, aerospace, or commercial aircraft

FEATURES

- Extreme resistance to impact, shock, and vibration
- Manufactured to MIL-PRF-27, Class S, Grade 5
- High reliability for space and mission critical applications
- Ultra miniature in size and minimalistic design
- Design layouts in through-hole or surface mount types
- Available with magnetic shielding and/or electrostatic shielding

Contact Pico for part number of available options:

- Screening and qualification criteria to flight standard
- Capability to thermal shock up to 300 cycles
- Extra layers of magnetic shielding
- Fully RoHS compliant or with exemption 7(a)
- Modifications to mechanical design and electrical characteristics
- Custom new design and parameters

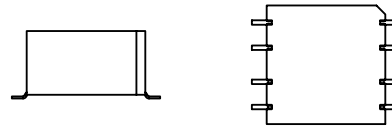


SPECIFICATIONS

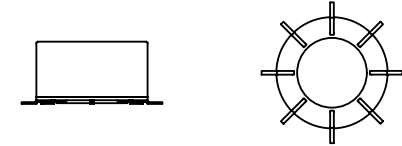
R SERIES - THROUGH HOLE



82000 SERIES - SQUARE SURFACE MOUNT



CSR SERIES - ROUND SURFACE MOUNT



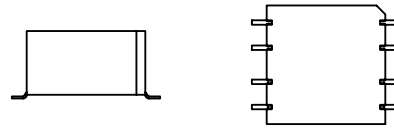
Through Hole	Surface Mount		Primary Impedance [Ω]	Secondary Impedance with Split Windings		Power			Primary Unbalanced DC Current [mA]	Primary DCR [Ω]	Secondary DCR		Turns Ratio PRI:SEC	
	Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel
R-20003	82003	CSR003	20 CT	8 CT	2	1.5	.9	.03	22	1.6	.76	.19	1.58:1	3.16:1
R-20005	82005	CSR005	20 CT	20 CT	5	1.5	.9	.03	22	1.6	1.9	.48	1:1	2:1
R-20010	82010	CSR010	32 CT	32 CT	8	1.5	.9	.03	17.5	2.56	3	.75	1:1	2:1
R-20015	82015	CSR015	40 CT	40 CT	10	1.5	.9	.03	16	3.2	3.8	.95	1:1	2:1
R-20018	82018	CSR018	48 CT	16 CT	4	1.5	.9	.03	14.5	3.84	1.52	.38	1.73:1	3.46:1
R-20020	82020	CSR020	50 CT	50 CT	12.5	1.5	.9	.03	14	4	4.75	1.19	1:1	2:1
R-20025	82025	CSR025	80 CT	32 CT	8	1.5	.9	.03	11	6.4	3	.75	1.58:1	3.16:1
R-20028	82028	CSR028	100 CT	40 CT	10	1.5	.9	.03	10	8	3.8	.95	1.58:1	3.16:1
R-20030	82030	CSR030	100 CT	100 CT	25	1.5	.9	.03	10	8	9.5	2.38	1:1	2:1
R-20035	82035	CSR035	120 CT	12.8 CT	3.2	1.5	.9	.03	9	9.6	1.22	.3	3.06:1	6.12:1
R-20040	82040	CSR040	120 CT	60 CT	15	1.5	.9	.03	9	9.6	5.7	1.4	1.14:1	2.83:1
R-20045	82045	CSR045	120 CT	120 CT	30	1.5	.9	.03	9	9.6	11.4	2.85	1:1	2:1
R-20050	82050	CSR050	150 CT	12 CT	3	1.5	.9	.03	8	12	1.14	.29	3.54:1	7.08:1
R-20055	82055	CSR055	150 CT	50 CT	12.5	1.5	.9	.03	8	12	4.75	1.19	1.73:1	3.46:1
R-20060	82060	CSR060	150 CT	100 CT	25	1.5	.9	.03	8	12	9.5	2.38	1.22:1	2.44:1
R-20065	82065	CSR065	150 CT	150 CT	37.5	1.5	.9	.03	8	12	14.3	3.56	1:1	2:1
R-20070	82070	CSR070	150 CT	600 CT	150	1.5	.9	.03	8	12	57	14.3	1:2	1:1
R-20075	82075	CSR075	200 CT	200 CT	50	1.5	.9	.03	7	16	19	4.75	1:1	2:1
R-20080	82080	CSR080	300 CT	12 CT	3	1.5	.9	.03	5.5	24	1.14	.29	5:1	10:1
R-20085	82085	CSR085	300 CT	50 CT	12.5	1.5	.9	.03	5.5	24	4.75	1.19	2.45:1	4.9:1
R-20090	82090	CSR090	300 CT	150 CT	37.5	1.5	.9	.03	5.5	24	14.25	3.56	1.41:1	2.83:1
R-20095	82095	CSR095	300 CT	300 CT	75	1.5	.9	.03	5.5	24	28.5	7.13	1:1	2:1
R-20100	82100	CSR100	300 CT	600 CT	150	1.5	.9	.03	5.5	24	57	14.25	1:1.41	1.41:1
R-20105	82105	CSR105	320 CT	12.8 CT	3.2	1.5	.9	.03	5.5	25.6	1.22	.3	5:1	10:1
R-20110	82110	CSR110	400 CT	40 CT	10	1.5	.9	.03	5	32	3.8	.95	3.16:1	6.32:1

SPECIFICATIONS

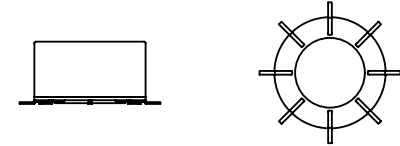
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82000 SERIES - SQUARE SURFACE MOUNT



CSR SERIES - ROUND SURFACE MOUNT



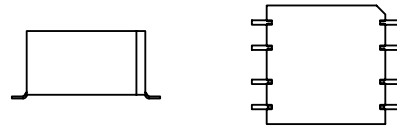
Through Hole	Surface Mount		Primary Impedance [Ω]	Secondary Impedance with Split Windings		Power			Primary Unbalanced DC Current [mA]	Primary DCR [Ω]	Secondary DCR		Turns Ratio PRI:SEC	
	Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel
R-20115	82115	CSR115	400 CT	120 CT	30	1.5	.9	.03	5	32	11.4	2.85	1.83:1	3.65:1
R-20120	82120	CSR120	400 CT	200 CT	50	1.5	.9	.03	5	32	19	4.75	1.41:1	2.83:1
R-20125	82125	CSR125	400 CT	400 CT	100	1.5	.9	.03	5	32	38	9.5	1:1	2:1
R-20130	82130	CSR130	400 CT	1000 CT	250	1.5	.9	.03	5	32	95	23.8	1:1.58	1.26:1
R-20135	82135	CSR135	400 CT	2000 CT	500	1.5	.9	.03	5	32	190	47.5	1:2.24	1:1.12
R-20140	82140	CSR140	400 CT	4000 CT	1000	1.5	.9	.03	5	32	380	95	1:3.16	1:1.58
R-20142	82142	CSR142	500 CT	12.8 CT	3.2	1.5	.9	.03	4.5	40	1.22	.3	6.25:1	12.5:1
R-20144	82144	CSR144	500 CT	16 CT	4	1.5	.9	.03	4.5	40	1.52	.38	5.6:1	11.2:1
R-20145	82145	CSR145	500 CT	50 CT	12.5	1.5	.9	.03	4.5	40	4.75	1.19	3.16:1	6.32:1
R-20147	82147	CSR147	500 CT	150 CT	37.5	1.5	.9	.03	4.5	40	14.25	3.56	1.83:1	3.65:1
R-20150	82150	CSR150	500 CT	500 CT	125	1.5	.9	.03	4.5	40	47.5	11.88	1:1	2:1
(1) R-20155	82155	CSR155	500 CT	500 CT	-	1.5	.9	.03	4.5	40	47.5	-	1:1	-
R-20160	82160	CSR160	500 CT	600 CT	150	1.5	.9	.03	4.5	40	57	14.25	1:1.1	1.83:1
R-20165	82165	CSR165	600 CT	12.8 CT	3.2	1.5	.9	.03	4	48	1.22	.3	6.85:1	13.7:1
R-20167	82167	CSR167	600 CT	30 CT	7.5	1.5	.9	.03	4	48	2.85	.71	4.47:1	8.94:1
R-20170	82170	CSR170	600 CT	48 CT	12	1.5	.9	.03	4	48	4.56	1.14	3.54:1	7.07:1
R-20175	82175	CSR175	600 CT	200 CT	50	1.5	.9	.03	4	48	19	4.75	1.73:1	3.46:1
R-20180	82180	CSR180	600 CT	600 CT	150	1.5	.9	.03	4	48	57	14.25	1:1	2:1
(1) R-20185	82185	CSR185	600 CT	600 CT	-	1.5	.9	.03	4	48	57	-	1:1	-
(1) R-20186	82186	CSR186	600 CT	900 CT	-	1.5	.9	.03	4	48	85.5	-	1:1.22	-
R-20187	82187	CSR187	600 CT	1200 CT	300	1.5	.9	.03	4	48	114	28.5	1:1.41	1.41:1
R-20190	82190	CSR190	640 CT	12.8 CT	3.2	1.5	.9	.03	4	51.2	1.22	.3	7.07:1	14.14:1
R-20195	82195	CSR195	700 CT	100 CT	25	1.5	.9	.03	3.5	56	9.5	2.38	2.65:1	5.29:1
R-20200	82200	CSR200	800 CT	12.8 CT	3.2	1.5	.9	.03	3.5	64	1.22	.3	7.91:1	15.8:1
R-20205	82205	CSR205	800 CT	48 CT	12	1.5	.9	.03	3.5	64	4.56	1.14	4.08:1	8.16:1

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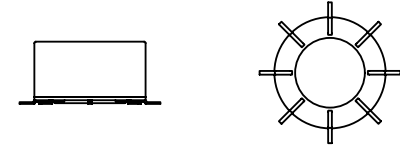
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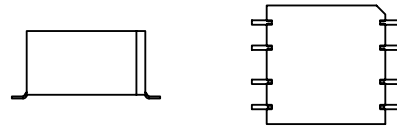
Through Hole	Surface Mount		Primary Impedance [Ω]	Secondary Impedance with Split Windings		Power			Primary Unbalanced DC Current [mA]	Primary DCR [Ω]	Secondary DCR		Turns Ratio PRI:SEC		
	Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel	
	R-20210	82210	CSR210	800 CT	800 CT	200	1.5	.9	.03	3.5	64	76	19	1:1	2:1
	R-20215	82215	CSR215	900 CT	600 CT	150	1.5	.9	.03	3	72	57	14.3	1.23:1	2.45:1
(1)	R-20217	82217	CSR217	900 CT	900 CT	-	1.5	.9	.03	3	72	85.5	-	1:1	-
	R-20220	82220	CSR220	1000 CT	12 CT	3	1.5	.9	.03	3	80	1.14	.29	9.13:1	18.26:1
	R-20225	82225	CSR225	1000 CT	50 CT	12.5	1.5	.9	.03	3	80	4.75	1.19	4.47:1	8.94:1
	R-20230	82230	CSR230	1000 CT	1000 CT	250	1.5	.9	.03	3	80	95	23.8	1:1	2:1
	R-20235	82235	CSR235	1060 CT	12.8 CT	3.2	1.5	.9	.03	3	85	1.22	.3	9.1:1	18.2:1
	R-20250	82240	CSR240	1200 CT	12.8 CT	3.2	1.5	.9	.03	3	96	1.22	.3	9.68:1	19.4:1
	R-20255	82245	CSR245	1200 CT	500 CT	125	1.5	.9	.03	3	96	47.5	11.88	1.55:1	3.1:1
	R-20250	82250	CSR250	1200 CT	1200 CT	300	1.5	.9	.03	3	96	114	28.5	1:1	2:1
(1)	R-20255	82255	CSR255	1200 CT	1200 CT	-	1.5	.9	.03	3	96	114	-	1:1	-
	R-20260	82260	CSR260	1500 CT	12 CT	3	1.5	.9	.03	2.5	120	1.14	.29	11.18:1	22.36:1
	R-20265	82265	CSR265	1500 CT	500 CT	125	1.5	.9	.03	2.5	120	47.5	11.88	1.73:1	3.46:1
(1)	R-20270	82270	CSR270	1500 CT	600 CT	-	1.5	.9	.03	2.5	120	57	-	1.58:1	-
(1)	R-20275	82275	CSR275	1500 CT	1500 CT	-	1.5	.9	.03	2.5	120	142	-	1:1	-
	R-20280	82280	CSR280	1600 CT	12.8 CT	3.2	1.5	.9	.03	2.5	128	1.22	3	11.18:1	22.36:1
	R-20283	82283	CSR283	2000 CT	8 CT	2	1.5	.9	.03	2.2	160	.76	.19	15.8:1	31.6:1
	R-20285	82285	CSR285	2000 CT	2000 CT	500	1.5	.9	.03	2.2	160	190	47.5	1:1	2:1
(1)	R-20290	82290	CSR290	2000 CT	2000 CT	-	1.5	.9	.03	2.2	160	190	-	1:1	-
	R-20295	82295	CSR295	2000 CT	8000 CT	2000	1.5	.9	.03	2.2	160	760	190	1:2	1:1
	R-20297	82297	CSR297	2500 CT	2500 CT	625	1.5	.9	.03	2	200	238	59.5	1:1	2:1
	R-20300	82300	CSR300	3000 CT	3000 CT	750	1.5	.9	.03	1.8	240	285	71.3	1:1	2:1
(1)	R-20305	82305	CSR305	3000 CT	3000 CT	-	1.5	.9	.03	1.8	240	285	-	1:1	-
	R-20310	82310	CSR310	3600 CT	3600 CT	900	1.5	.9	.03	1.7	288	342	86	1:1	2:1
	R-20312	82312	CSR312	4000 CT	16 CT	4	1.5	.9	.03	1.6	320	1.52	.38	15.8:1	31.6:1

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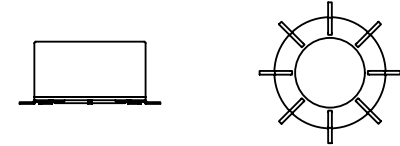
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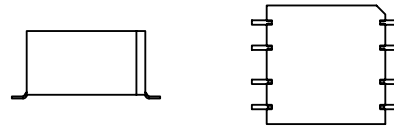
Through Hole	Surface Mount		Primary Impedance [Ω]	Secondary Impedance with Split Windings		Power			Primary Unbalanced DC Current [mA]	Primary DCR [Ω]	Secondary DCR		Turns Ratio PRI:SEC		
	Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel	
	R-20314	82314	CSR314	4000 CT	600 CT	150	1.5	.9	.03	1.6	320	57	14.3	2.58:1	5.16:1
	R-20315	82315	CSR315	4000 CT	1000 CT	250	1.5	.9	.03	1.6	320	95	23.8	2:1	4:1
(1)	R-20320	82320	CSR320	4000 CT	8000 CT	-	1.5	.9	.03	1.6	320	760	-	1:1.41	-
	R-20325	82325	CSR325	5000 CT	500 CT	125	1.5	.9	.03	1.4	400	47.5	11.88	3.16:1	6.32:1
	R-20330	82330	CSR330	5000 CT	5000 CT	1250	1.5	.9	.03	1.4	400	475	119	1:1	2:1
	R-20335	82335	CSR335	7500 CT	50 CT	12.5	1.3	.9	.03	1.2	600	4.75	1.19	12.25:1	24.5:1
	R-20340	82340	CSR340	7500 CT	100 CT	25	1.3	.9	.03	1.2	600	9.5	2.38	8.66:1	17.32:1
	R-20345	82345	CSR345	7500 CT	600 CT	150	1.3	.9	.03	1.2	600	57	14.3	3.54:1	7.07:1
	R-20350	82350	CSR350	7500 CT	2500 CT	625	1.3	.9	.03	1.2	600	238	59.5	1.73:1	3.46:1
(1)	R-20355	82355	CSR355	7500 CT	7500 CT	-	1.3	.9	.03	1.2	600	713	-	1:1	-
	R-20360	82360	CSR360	8000 CT	12.8 CT	3.2	1.2	.9	.03	1.1	640	1.22	.3	25:1	50:1
	R-20365	82365	CSR365	8000 CT	1000 CT	250	1.2	.9	.03	1.1	640	95	23.8	2.83:1	5.66:1
(1)	R-20370	82370	CSR370	8000 CT	1200 CT	-	1.2	.9	.03	1.1	640	114	-	2.58:1	-
(1)	R-20375	82375	CSR375	9000 CT	9000 CT	-	1.1	.9	.03	1.1	720	855	-	1:1	-
	R-20380	82380	CSR380	10,000 CT	12.8 CT	3.2	1.0	.9	.03	1	800	1.22	.3	28:1	56:1
	R-20385	82385	CSR385	10,000 CT	16 CT	4	1.0	.9	.03	1	800	1.52	.38	25:1	50:1
	R-20390	82390	CSR390	10,000 CT	100 CT	25	1.0	.9	.03	1	800	9.5	2.38	10:1	20:1
	R-20395	82395	CSR395	10,000 CT	200 CT	50	1.0	.9	.03	1	800	19	4.75	7.07:1	14.14:1
	R-20400	82400	CSR400	10,000 CT	500 CT	125	1.0	.9	.03	1	800	47.5	11.88	4.47:1	8.94:1
	R-20405	82405	CSR405	10,000 CT	600 CT	150	1.0	.9	.03	1	800	57	14.25	4.08:1	8.16:1
	R-20410	82410	CSR410	10,000 CT	1000 CT	250	1.0	.9	.03	1	800	95	23.8	3.16:1	6.32:1
	R-20415	82415	CSR415	10,000 CT	1200 CT	300	1.0	.9	.03	1	800	114	28.5	2.89:1	5.77:1
	R-20420	82420	CSR420	10,000 CT	1500 CT	375	1.0	.9	.03	1	800	143	35.8	2.58:1	5.16:1
	R-20425	82425	CSR425	10,000 CT	2000 CT	500	1.0	.9	.03	1	800	190	47.5	2.24:1	4.47:1
	R-20430	82430	CSR430	10,000 CT	5000 CT	1250	1.0	.9	.03	1	800	475	119	1.41:1	2.83:1

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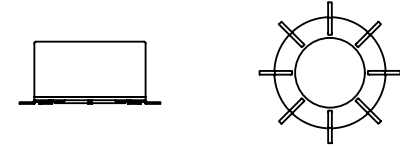
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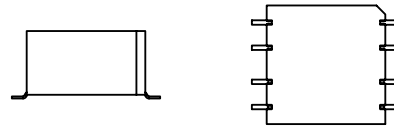
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	Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel	
	R-20435	82435	CSR435	10,000 CT	7500 CT	1875	1.0	.9	.03	1	800	713	178	1.16:1	2.31:1
	R-20440	82440	CSR440	10,000 CT	10,000 CT	2500	1.0	.9	.03	1	800	950	238	1:1	2:1
(1)	R-20445	82445	CSR445	10,000 CT	10,000 CT	-	1.0	.9	.03	1	800	950	-	1:1	-
	R-20450	82450	CSR450	15,000 CT	400 CT	100	.66	.66	.03	.8	1200	38	9.5	6.12:1	12.25:1
	R-20452	82452	CSR452	15,000 CT	500 CT	125	.66	.66	.03	.8	1200	48	12	5.48:1	10.95:1
	R-20455	82455	CSR455	15,000 CT	600 CT	150	.66	.66	.03	.8	1200	57	14.3	5:1	10:1
	R-20460	82460	CSR460	15,000 CT	10,000 CT	2500	.66	.66	.03	.8	1200	950	238	1.22:1	2.45:1
(1)	R-20465	82465	CSR465	15,000 CT	15,000 CT	-	.66	.66	.03	.8	1200	1430	-	1:1	-
	R-20470	82470	CSR470	15,000 CT	15,000 CT	3750	.66	.66	.03	.8	1200	1430	357	1:1	2:1
	R-20475	82475	CSR475	16,000 CT	1000 CT	250	.62	.62	.03	.8	1280	95	23.8	4:1	8:1
	R-20480	82480	CSR480	20,000 CT	500 CT	125	.5	.5	.03	.7	1600	47.5	11.88	6.32:1	12.65:1
	R-20485	82485	CSR485	20,000 CT	600 CT	150	.5	.5	.03	.7	1600	57	14.25	5.77:1	11.55:1
	R-20490	82490	CSR490	20,000 CT	800 CT	200	.5	.5	.03	.7	1600	76	19	5:1	10:1
	R-20495	82495	CSR495	20,000 CT	1000 CT	250	.5	.5	.03	.7	1600	95	23.8	4.47:1	8.94:1
	R-20500	82500	CSR500	20,000 CT	5000 CT	1250	.5	.5	.03	.7	1600	475	119	2:1	4:1
	R-20505	82505	CSR505	20,000 CT	10,000 CT	2500	.5	.5	.03	.7	1600	950	238	1.41:1	2.83:1
(1)	R-20510	82510	CSR510	20,000 CT	20,000 CT	-	.5	.5	.03	.7	1600	1900	-	1:1	-
	R-20515	82515	CSR515	25,000 CT	500 CT	125	.4	.4	.03	.6	2000	47.5	11.88	7.07:1	14.14:1
	R-20520	82520	CSR520	25,000 CT	1000 CT	250	.4	.4	.03	.6	2000	95	23.8	5:1	10:1
	R-20525	82525	CSR525	30,000 CT	50 CT	12.5	.33	.33	.03	.6	2400	4.75	1.19	24.5:1	49:1
	R-20530	82530	CSR530	30,000 CT	1200 CT	300	.33	.33	.03	.6	2400	114	28.5	5:1	10:1
	R-20532	82532	CSR532	30,000 CT	500 CT	125	.33	.33	.03	.6	2400	47.5	11.88	7.7:1	15.5:1
	R-20534	82534	CSR534	30,000 CT	200 CT	50	.33	.33	.03	.6	2400	19	4.75	12.2:1	24.5:1
	R-20535	82535	CSR535	30,000 CT	5000 CT	1250	.33	.33	.03	.6	2400	475	119	2.45:1	4.9:1
	R-20540	82540	CSR540	30,000 CT	10,000 CT	2500	.33	.33	.03	.6	2400	950	238	1.73:1	3.46:1

SPECIFICATIONS

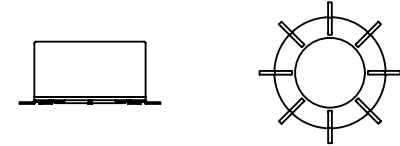
R SERIES - THROUGH HOLE



82000 SERIES - SQUARE SURFACE MOUNT



CSR SERIES - ROUND SURFACE MOUNT



	Through Hole	Surface Mount		Primary Impedance [Ω]	Secondary Impedance with Split Windings		Power			Primary Unbalanced DC Current [mA]	Primary DCR [Ω]	Secondary DCR		Turns Ratio PRI:SEC	
		Square	Round		Series [Ω]	Parallel [Ω]	1kHz+ [W]	300Hz+ [W]	75Hz+ [W]			Series [Ω]	Parallel [Ω]	Series	Parallel
(1)	R-20545	82545	CSR545	30,000 CT	30,000 CT	-	.33	.33	.03	.6	2400	2850	-	1:1	-
	R-20550	82550	CSR550	40,000 CT	400 CT	100	.25	.25	.03	.5	3200	38	9.5	10:1	20:1
	R-20555	82555	CSR555	40,000 CT	2000 CT	500	.25	.25	.03	.5	3200	190	47.5	4.47:1	8.94:1
	R-20560	82560	CSR560	40,000 CT	4000 CT	1000	.25	.25	.03	.5	3200	380	95	3.16:1	6.32:1
	R-20565	82565	CSR565	40,000 CT	20,000 CT	5000	.25	.25	.03	.5	3200	1900	475	1.41:1	2.83:1
(1)	R-20570	82570	CSR570	40,000 CT	40,000 CT	-	.25	.25	.03	.5	3200	3800	-	1:1	-
	R-20575	82575	CSR575	50,000 CT	200 CT	50	.2	.2	.03	.4	4000	19	4.75	15.8:1	31.6:1
	R-20577	82577	CSR577	50,000 CT	500 CT	125	.2	.2	.03	.4	4000	47.5	11.88	10:1	20:1
	R-20578	82578	CSR578	50,000 CT	600 CT	150	.2	.2	.03	.4	4000	57	14.3	9.13:1	18.26:1
	R-20579	82579	CSR579	50,000 CT	50,000 CT	12,500	.2	.2	.03	.4	4000	4750	1190	1:1	2:1
	R-20580	82580	CSR580	60,000 CT	15,000 CT	3750	.16	.16	.03	.4	4800	1430	358	2:1	4:1
	R-20585	82585	CSR585	62,500 CT	50 CT	12.5	.16	.16	.03	.4	5000	4.75	1.19	35.4:1	70.7:1
	R-20587	82587	CSR587	80,000 CT	15,000 CT	3750	.12	.12	.03	.3	6400	1430	358	2.3:1	4.6:1
	R-20590	82590	CSR590	90,000 CT	10,000 CT	2500	.11	.11	.03	.3	7200	950	238	3:1	6:1
	R-20595	82595	CSR595	95,000 CT	15,000 CT	3750	.1	.1	.03	.3	7600	1430	358	2.5:1	5:1
	R-20600	82600	CSR600	100,000 CT	60 CT	15	.1	.1	.03	.3	8000	5.7	1.43	40.8:1	81.6:1
	R-20605	82605	CSR605	100,000 CT	100 CT	25	.1	.1	.03	.3	8000	9.5	2.38	31.6:1	63.2:1
	R-20610	82610	CSR610	100,000 CT	500 CT	125	.1	.1	.03	.3	8000	47.5	11.88	14.1:1	28.3:1
	R-20613	82613	CSR613	100,000 CT	1000 CT	250	.1	.1	.03	.3	8000	95	23.8	10:1	20:1
	R-20614	82614	CSR614	100,000 CT	2000 CT	500	.1	.1	.03	.3	8000	190	47.5	7.07:1	14.14:1
	R-20615	82615	CSR615	100,000 CT	10,000 CT	2500	.1	.1	.03	.3	8000	950	238	3.16:1	6.32:1
	R-20620	82620	CSR620	135,000 CT	82 CT	20.5	.07	.07	.03	.2	10,800	7.8	1.9	40.6:1	81.2:1

Note 1: Includes electrostatic shield.

SPECIFICATIONS

GENERAL

Parameter	Condition	Min.	Typ.	Max.	Units
Dielectric Strength	60Hz	-	200	-	V _{RMS}
Insulation Resistance	300VDC	10	-	-	GΩ
Distortion	75Hz, 300Hz & 1kHz @ Rated Power	-	-	5	%
Frequency Response	75 - 30kHz @ 1mW	-3	-	3	dB
Operating Temperature Range	Ambient with temperature rise	-55	-	+130	°C
Storage Temperature Range	Ambient	-55	-	+105	°C
Size	R Series - Diameter x Height	0.75 x 0.375 (19.05 x 9.525)			inches (mm)
	CSR Series - Diameter x Height	0.75 x 0.42 (19.05 x 10.668)			
	82000 Series - Length x Width x Height	0.8 x 0.8 x 0.455 (20.32 x 20.32 x 11.557)			
Weight	R, CSR, & 82000 Series	-	12	-	grams
Case	R & CSR Series	Epoxy Insulated Metal			
	82000 Series	Glass Reinforced Polymer			
Potting	Vacuum Impregnated Epoxy				
Box Packaging (L x W x H)	R Series	9.45 x 2.35 x 1.29 (240.03 x 59.69 x 32.766)			inches (mm)
Tube Packaging (W x H x L)	CSR & 82000 Series	1.24 x 0.61 x 20.0 (31.496 x 15.494 x 508)			
Tape & Reel Packaging	Upon request				
Moisture Sensitivity Level	Surface Mount only	Level 3			

OPTIONAL DESIGN CRITERIA

Test	Standard	Description
Vibration	MIL-STD-202	Method 204, Vibration, High Frequency
Shock	MIL-STD-202	Method 213, Shock (Specified Pulse)
Immersion	MIL-STD-202	Method 104, Immersion
Moisture Resistance	MIL-STD-202	Method 106, Moisture Resistance
Flammability	MIL-STD-202	Method 111, Flammability (External Flame)
Thermal Shock	MIL-STD-202	Method 107, Thermal Shock

OPTIONAL SCREENING AND QUALIFICATION

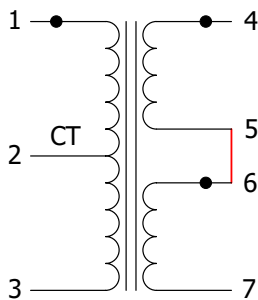
Standard	Screening & Qualification	Test ⁽²⁾
MIL-PRF-27	a.) Group A inspection Level-T - Table VII b.) Qualification inspection, Grade 5 - Table V	I. Thermal Shock II. Vibration III. Burn-in IV. Induced Voltage V. Shock VI. Dielectric Withstanding Voltage (at reduced pressure) VII. Insulation Resistance VIII. Electrical Characteristics IX. Visual and Mechanical Examination (External) X. Life XI. Radiographic Inspection
MIL-STD-981	a.) Group A screening tests - Table VI b.) Group B tests - Table XII, Class S	
EEE-INST-002, Section M1	a.) Magnetics Screening Req. - Table 2 b.) Magnetics Part Qual. - Table 3	

Note 2: Screening and qualification tests are not limited to the options in the chart above. Each standard may also be stringent or exclude certain tests from one another. Please contact Pico for specific application needs and for Pico part number.

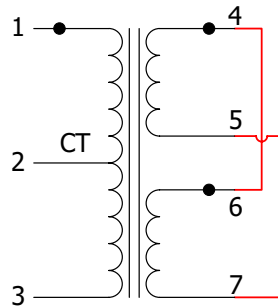
ELECTRICAL SCHEMATIC

R SERIES - THROUGH HOLE

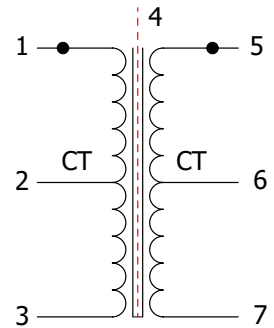
SPLIT SECONDARIES
SERIES CONNECTION



SPLIT SECONDARIES
PARALLEL CONNECTION

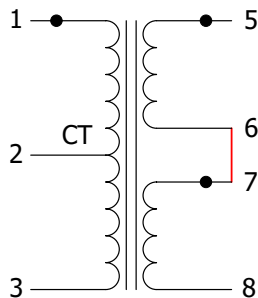


ELECTROSTATIC SHIELD

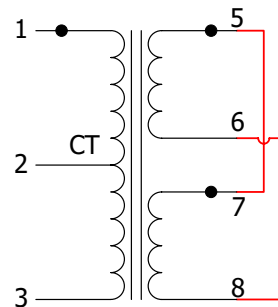


82000 & CSR SERIES - SURFACE MOUNT

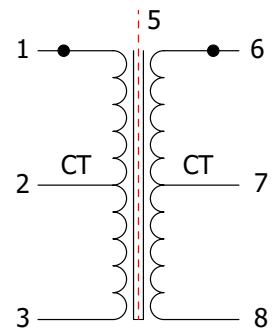
SPLIT SECONDARIES
SERIES CONNECTION



SPLIT SECONDARIES
PARALLEL CONNECTION



ELECTROSTATIC SHIELD

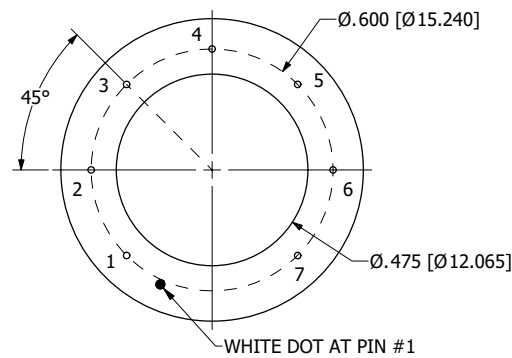
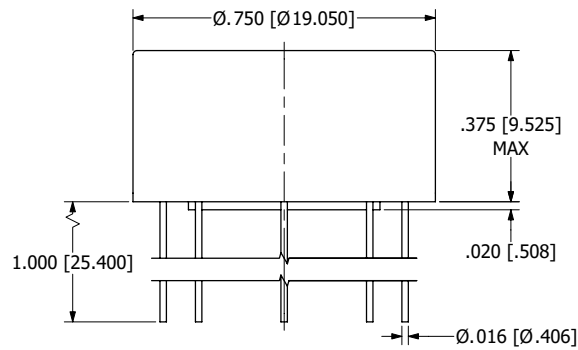


NOTES

a. ANY TERMINALS NOT SHOWN HERE MAY BE USED FOR MECHANICAL STABILITY ON THE PCB ONLY, AS THEY DO NOT HAVE ANY ELECTRICAL CONNECTION.

b. CT STANDS FOR "CENTER-TAP", WHERE THE TOTAL NUMBER OF TURNS IS EVENLY SPLIT BETWEEN THE TOP HALF AND BOTTOM HALF OF A COMPLETE WINDING.

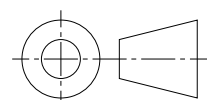
R SERIES - THROUGH HOLE



BOTTOM VIEW

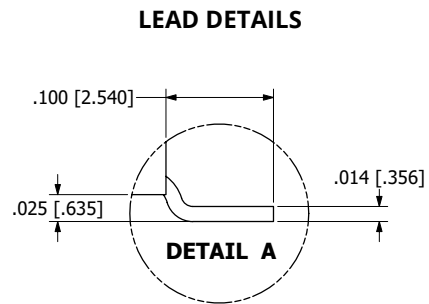
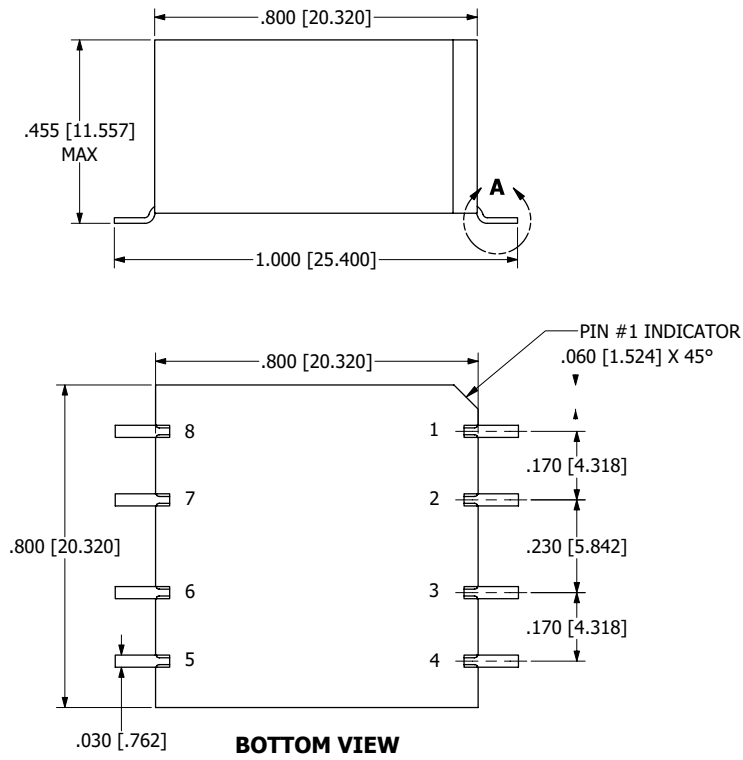
NOTES

- a. ALL DIMENSIONS ARE IN INCHES, [] = MM
- b. TERMINALS ARE CLOCKWISE FROM PIN #1



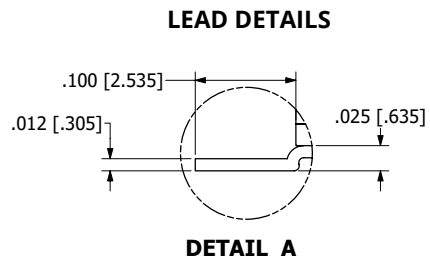
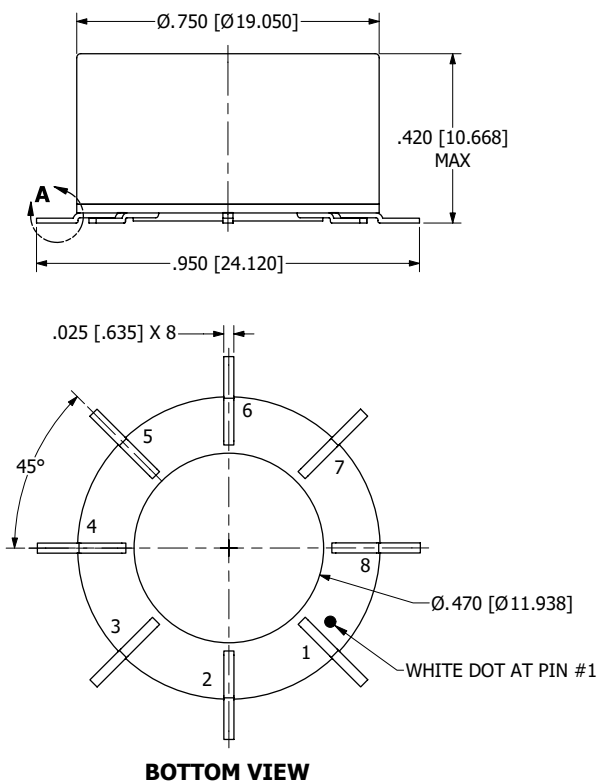
MECHANICAL DRAWINGS

82000 SERIES - SQUARE SURFACE MOUNT

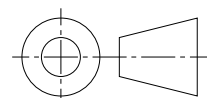


- NOTES**
- a. ALL DIMENSIONS ARE IN INCHES, [] = MM
 - b. TERMINALS ARE CLOCKWISE FROM PIN #1
 - c. PIN #4 HAS NO CONNECTION

CSR SERIES - ROUND SURFACE MOUNT

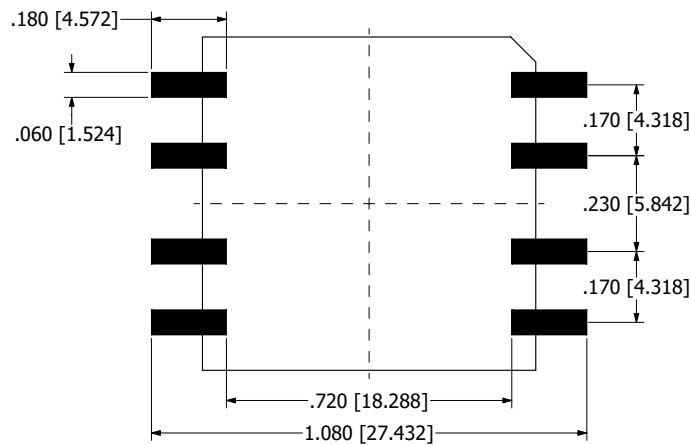


- NOTES**
- a. ALL DIMENSIONS ARE IN INCHES, [] = MM
 - b. TERMINALS ARE CLOCKWISE FROM PIN #1
 - c. PIN #4 HAS NO CONNECTION

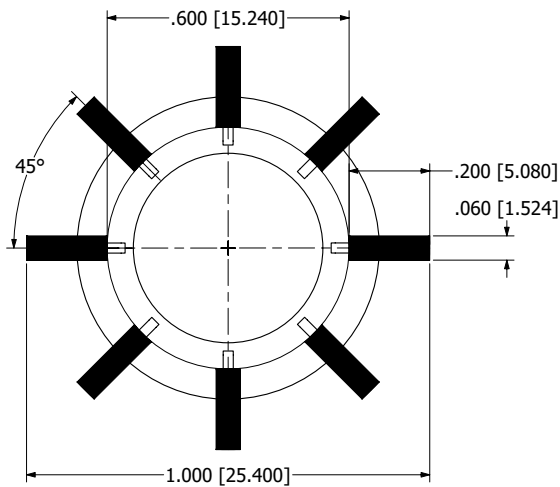


RECOMMENDED LAND PATTERN DIMENSIONS

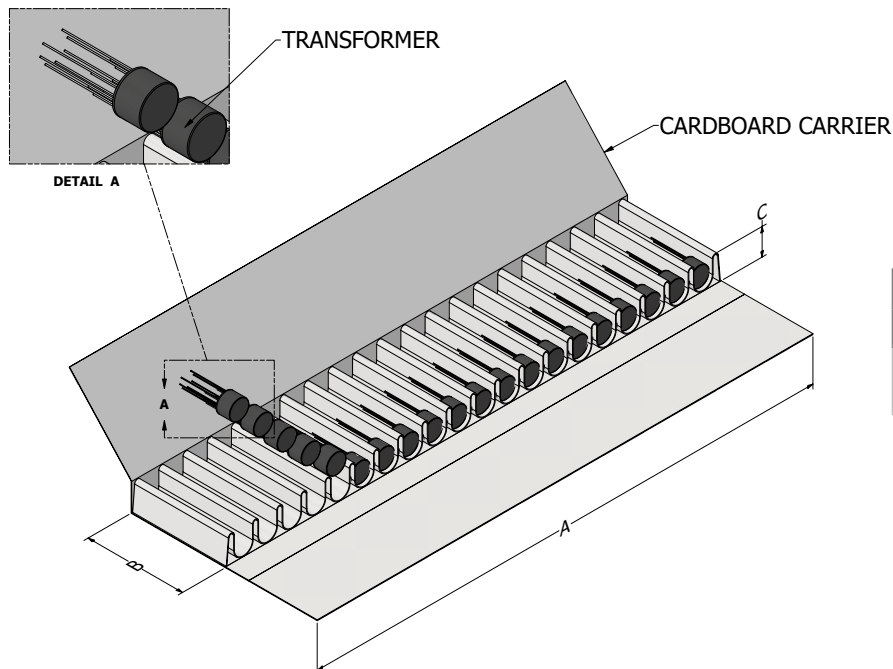
82000 SERIES - SQUARE SURFACE MOUNT



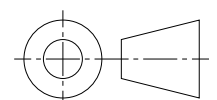
CSR SERIES - ROUND SURFACE MOUNT



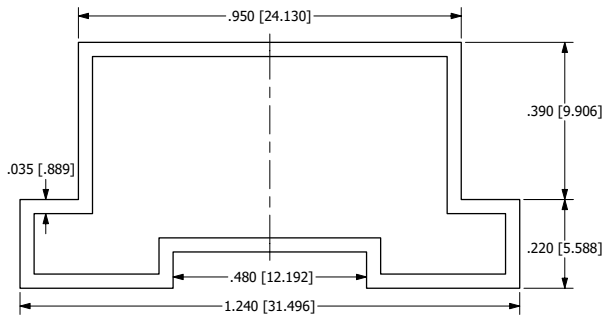
BOX PACKAGING - R SERIES



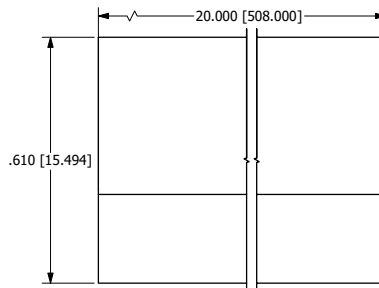
Dimension		
A	B	C
9.45	2.35	1.29
[240.03]	[59.69]	[32.766]



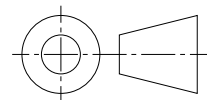
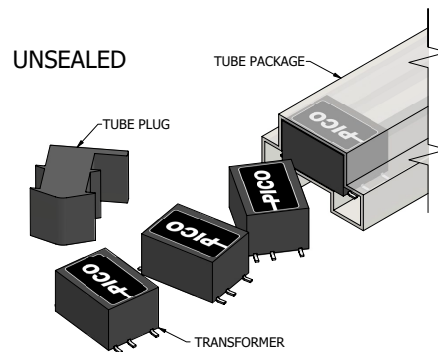
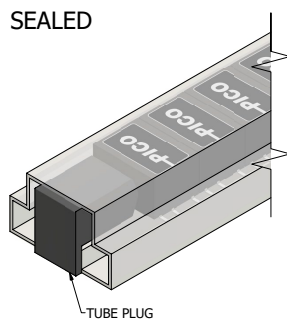
TUBE PACKAGING - 82000 & CSR SERIES



PLAN VIEW



ELEVATION VIEW



Pico warrants each product manufactured by us and sold by us or an authorized representative, to be free from defects in material and workmanship. If properly used, it will perform within its applicable specifications for a period of one year after original shipment. Pico's obligation under this guarantee is limited to repairing or replacing our product to the original purchaser. This warranty is in lieu of all other warranties, express or implied and constitutes fulfillment of our obligations to the purchaser. We do not guarantee that the products can be used for a particular purpose other than those solely covered by the product's specifications. Pico must be notified if the product must meet particular certifications and/or standards. We assume no liability, in any event, for consequential damages, for anticipated or lost profits, incidental damages or loss of time or other losses incurred by the purchaser or any third party in connection with products covered by this warranty or otherwise. The purchaser will indemnify and hold Pico harmless for any damages, losses, costs, etc. from usage not within the product's specifications. Pico must be consulted before usage of its products in a nuclear, radioactive or space environment.

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