

Surface Mount Power

PERFORMANCE DATA

Construction	Temp. cycle (-55°C to 125°C, 1000 cycles)	Load Life (1000 hours at 25°C)	Immersion (260°C for 10 sec.)	Momentary Overload
RC Carbon/Ceramic Comp.	±4.0%+.05Ω	±10.0%+.05Ω	±3.0%+.05Ω	6.3x rated power for 5 sec.
RF Metal Film	±0.5%+.05Ω	±0.5%+.05Ω	±0.1%+.05Ω	2x rated power for 0.1 sec.
RW Wirewound	±0.5%+.05Ω	±3.0%+.05Ω	±0.1%+.05Ω	5x rated power for 5 sec.
RP Power Film	±3.0%+.05Ω	±5.0%+.05Ω	±0.5%+.05Ω	2x rated power for 0.1 sec.
RN Wirewound, Non-inductive	±0.5%+.05Ω	±3.0%+.05Ω	±0.1%+.05Ω	5x rated power for 5 sec.

ALL models: **Leaching** (260°C Solder immersion, 60 sec.)..... No visible leaching
Thermal Shock (Units at -55°C, then rated power applied).. No mechanical damage
Flammability UL Material rating, UL94V0

Derating



TCR



Recommended Solder Profile



Preheating: 145°C ±15°, max. 120 sec.
Soldering: min. 220°C, max. 60 sec.
Max. Temp.: 260°C ±5°, 10 sec.



The temperature rise graph data was obtained by a selection of test substrate size and trace width for each resistor size to limit operating temperatures to safe values.

The operating temperature safe rises are either 100°C substrate temperature rise or 180°C package hot spot temperature rise at 25°C ambient.

FR4: 0.062 in. thick; 0.062 in. traces

Alumina: 0.040 in. thick; 0.010 in. traces

Molding material rated at 205°C continuous.

RC SERIES: BAKE PROCEDURE

RC SERIES ONLY

A. Heat Treatment

110°C ±10°C
15 hours

B. Frequency of heat treatment

1 time only

C. Cautions

Solderability: may be affected due to oxidization of lead wire

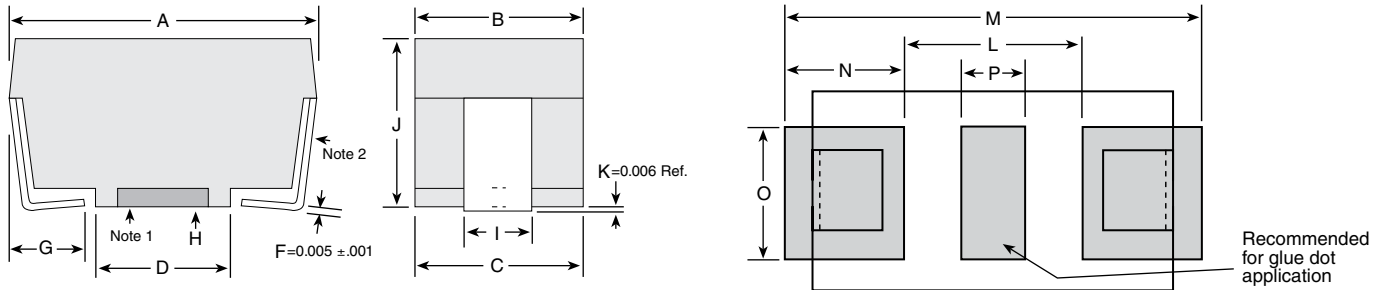
Resistance value: some units may not completely recover to original value.

Soldering heat: some treated product may have substantial resistance change during soldering operation. It is recommended that parts be tested to evaluate soldering heat effects.

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DIMENSIONS

(in./mm)



Packages	Package Outline Dimensions					PC Board Land Pattern						
	A	B	C	D	G	I	J	L	M	N	O	P
BA (in.)	0.246±.020	0.136±.005	0.133 REF	0.110±.010	0.047 ±0.020	0.054±.012	0.136±.005	0.150	0.346	0.098	0.126	0.050
(mm)	6.248±.508	3.454±.127	3.378 REF	2.794±.254	1.194 ±0.508	1.372±.305	3.454±.127	3.81	8.79	2.49	3.20	1.27
CA (in.)	0.394±.020	0.159±.005	0.156 REF	0.220±.010	0.062 Nom.	0.078±.012	0.159±.005	0.256	0.524	0.134	0.126	0.060
(mm)	10.008±.508	4.039±.127	3.962 REF	5.588±.254	1.575 Nom.	1.981±.305	4.038±.127	6.50	13.31	3.40	3.20	1.52
CB (in.)	0.407±.020	0.226±.005	0.222 REF	0.260±.010	0.062 Nom.	0.084±.012	0.222±.005	0.276	0.537	0.131	0.126	0.093
(mm)	10.338±.508	5.74±.127	5.639 REF	6.604±.254	1.575 Nom.	2.134±.305	5.639±.127	7.01	13.64	3.33	3.20	2.36
DA (in.)	0.455±.020	0.240±.005	0.236 REF	0.260±.010	0.062 Nom.	0.143±.012	0.226±.005	0.317	0.585	0.134	0.155	0.093
(mm)	11.557±.508	6.096±.127	5.994 REF	6.604±.254	1.575 Nom.	3.632±.305	5.740±.127	8.05	14.86	3.40	3.94	2.36
DB (in.)	0.625±.020	0.273±.005	0.268 REF	0.417±.010	0.062 Nom.	0.143±.012	0.226±.005	0.474	0.742	0.134	0.155	0.093
(mm)	15.875±.508	6.934±.127	6.807 REF	10.592±.254	1.575 Nom.	3.632±.305	5.740±.127	12.040	18.85	3.40	3.94	2.36
EA (in.)	0.811±.020	0.273±.005	0.268 REF	0.572±.010	0.093 Nom.	0.143±.012	0.273±.005	0.611	1.000	0.195	0.155	0.093
(mm)	20.599±.508	6.934±.127	6.807 REF	14.529±.254	2.362 Nom.	3.632±.305	6.934±.127	15.52	25.4	4.95	3.94	2.36
BB (in.)	0.202±.010	0.10±.010	0.095 REF	0.079±.010	0.050 Nom.	0.065±.012	0.135±.005	0.078	0.328	0.125	0.126	0.026
(mm)	5.140±.508	2.54±.127	2.41 REF	2.00±.254	1.280 Nom.	1.640±.305	3.420±.127	1.98	8.33	3.18	3.20	0.66

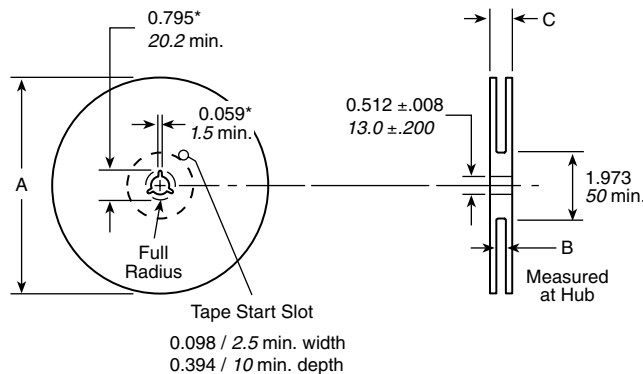
Note 1: Packages BA and CA are only available with a pedestal base. Packages CB and DA are available in either pedestal or recessed base. Packages DB and EA are only available in a recessed base.

Note 2: Test point is .020 above PCB.

Note 3: Tape and reel dimensions per EIA 481 A except "EA" size which is 12 mm component pitch versus 16mm pitch.

Land pattern dimensions are for reference only

Reel Dimensions



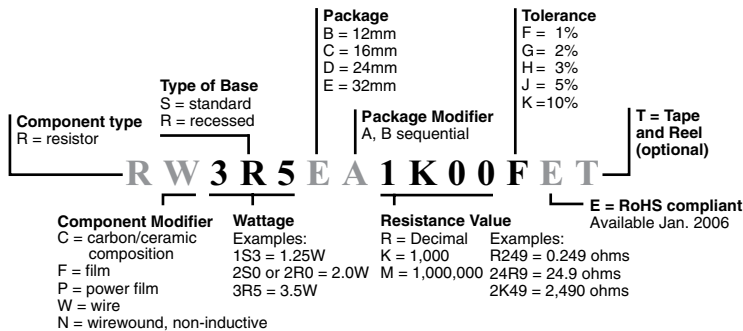
Size	A nom.	B	C max.	Quantity
12mm	13"	0.488" +0.078, -0.00	0.724"	2000 pcs. BA or 2500 pcs. BB
		12.4mm +2.0, -0.0	18.4mm	
16mm	13"	0.646" +0.078, -0.00	0.882"	1500 pcs. CA or 1000 pcs. CB
		16.4mm +2.0, -0.0	22.4mm	
24mm	13"	0.961" +0.078, -0.00	1.196"	1000 pcs. DA or DB
		24.4mm +2.0, -0.0	30.4mm	
32mm	13"	1.276" +0.078, -0.00	1.52"	750 pcs. EA
		32.4mm +2.0, -0.0	38.4mm	

All reels are compatible with major pick-and-place machines and made in accordance with EIA 481 A (except EA size, which is 12mm component pitch versus 16mm pitch).

(continued)

Surface Mount Power

ORDERING INFORMATION



(For example, the part number shown is a wire-wound resistor, 3.5 watt, recessed base, 32mm tape size, first case size [A], 1000 ohms 1% tolerance.)

Standard Part Numbers for Surface Mount Power Resistors

Ohmic value	Part No.	Wirewound										
		Package style	BA	CA	CB	CB	DA	DA	DB	EA	BB	EA
		Base: standard or recessed	S	S	S	R	S	R	R	R	S	R
	Prefix	RW1S0BA	RW1S5CA	RW2S0CB	RW2R0CB	RW2S0DA	RW2R0DA	RW3R0DB	RW3R5EA	RW0S6BB	RC1R0EA	
	Wattage	1.0	1.5	2.0	2.0	2.0	2.0	3.0	3.5	0.6	1.0	
	Suffix	Tolerance suffix: F = 1% J = 5% K = 10%										
0.005	R005	J	J		F/J							
0.010	R010	F/J	J	J	F	J	J	J	F			
0.015	R015	F/J	J						F			
0.020	R020	J	J	J	F	J		J	F			
0.025	R025	J										
0.027	R027	J										
0.030	R030	F	J	J				J	F			
0.033	R033	J										
0.036	R036	J										
0.050	R050	F/J	J	J	J	F	J	J	F			
0.056	R056	J										
0.075	R075	J							F			
0.080	R080	J						J				
0.100	R100	F/J	J	J	F	J	J	J	F			
0.150	R150	J	J	J	J							
0.200	R200	J	J					J				
0.220	R220	J	J									
0.240	R240	J	J						F			
0.300	R300	J		J								
0.330	R330	J		J								
0.400	R040	J										
0.400	R400	J		J								
0.470	R470	J	J	J		J			F			
0.500	R500	J	J		J			J				
0.750	R750	J	J						F			
1.00	1R00	F/J	J	J		J	J		F			
2.00	2R00	J	J						F			

Ohmic value	Part No.	Wirewound										
		Package style	BA	CA	CB	CB	DA	DA	DB	EA	BB	EA
		Base: standard or recessed	S	S	S	R	S	R	R	R	S	R
	Prefix	RW1S0BA	RW1S5CA	RW2S0CB	RW2R0CB	RW2S0DA	RW2R0DA	RW3R0DB	RW3R5EA	RW0S6BB	RC1R0EA	
	Wattage	1.0	1.5	2.0	2.0	2.0	2.0	3.0	3.5	0.6	1.0	
	Suffix	Tolerance suffix: F = 1% J = 5% K = 10%										
3.30	3R30										K	
4.70	4R70										K	
5.00	5R00								F			
5.60	5R60	J										
6.80	6R80										K	
7.50	7R50							J	F			
10.00	10R0	J	J	J		J			F	K		
15.00	15R0	J	J						F	K		
20.00	20R0			J								
22.00	22R0										K	
24.90	24R9								F			
33.00	33R0								F		K	
36.00	36R0								F			
47.00	47R0	J						J	F	K		
50.00	50R0											
51.00	51R0	J							J			
68.00	68R0										K	
82.00	82R0				J							
100.00	100R		J	J					F	K		
120.00	120R		J									
180.00	180R	J										
300.00	300R	J										
470.00	470R					J						
1K	1K00							J			K	
4.7K	4K70			J					J			
5K	5K00								J			