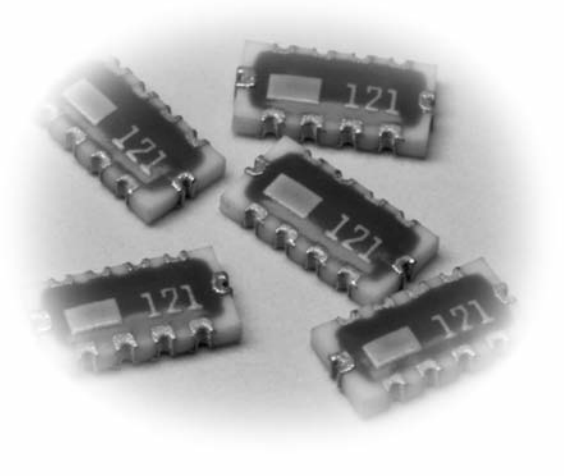
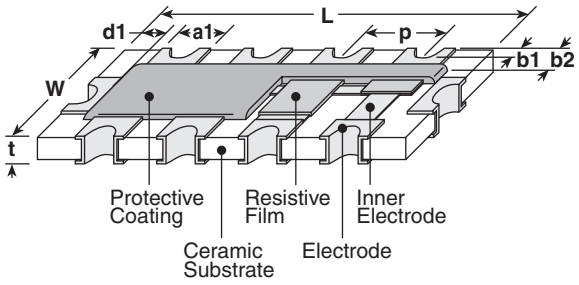


features

- Exceptional filtering capabilities and superior characteristics
- Filter out high frequency content of digital signals
- Marking: Yellow three-digit on green protective coat
- Products with lead-free terminations meet EU RoHS requirements

dimensions and construction

Size	Dimensions inches (mm)							
	L	W	t	a1	b1	b2	d1	p
1J	.126±.006 (3.2±0.15)	.063±.006 (1.6±0.15)	.026±.004 (0.65±0.1)	.013±.004 (0.33±0.1)	.006±.004 (0.15±0.1)	.014±.004 (0.35±0.1)	.01±.004 (0.25±0.1)	.025 Ref. (0.635 Ref.)
2A	.157±.008 (4.0±0.2)	.083±.008 (2.1±0.2)	.026±.004 (0.65±0.1)	.02 Ref. (0.5 Ref.)	.006 Ref. (0.15 Ref.)	.012±.008 (0.3±0.2)	.016±.006 (0.4±0.15)	.031 Ref. (0.8 Ref.)



ordering information

New Part #

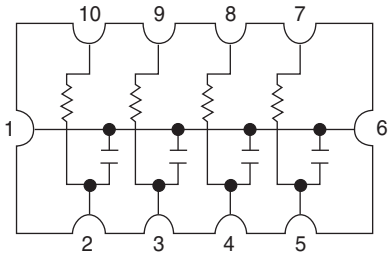
CR	2A	10	Y	T	TE	xxx/xxxJ
Type	Size	Terminations	Circuit Symbol	Termination Material	Packaging	Capacitance Resistance
	1J 2A		Y: 1J Nil: 2A	T: Sn (Other termination styles available, contact factory for options)	TE: 7" embossed plastic (4,000 pieces/reel)	3 digits + 1 for resistance tolerance for each Ex: 101/470J

For further information on packaging, please refer to Appendix A.

KOA SPEER ELECTRONICS, INC.

CR
chip resistor array

circuit schematic



applications and ratings (CR1J)

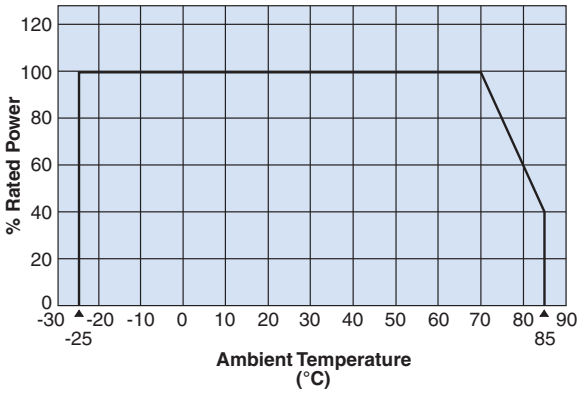
Part Designation	Capacitor Item	Capacitor Rating	Resistor Item	Resistor Rating
CR1J	——		Maximum Overload Voltage	15 - 8V
	Voltage Rating	12V (DC)	Power Rating	1/16W (<70°C)
	Capacitance Tolerance	+30% / -20%	Maximum Working Voltage	79V
	Temperature Coefficient	+20% / -55% (-25°C~85°C)	Temperature Coefficient	±200ppm/°C
	Dissipation Factor	3% Maximum, 0 + 1Khz 1.0Vrms	Resistance Tolerance	±5%
	Capacitance Range	10pF, 15pF, 22pF	Operating Temperature Range	-25°C to +85°C
	——		Resistor Range	22Ω, 47Ω, 100Ω, 220Ω
	——		Rated Ambient Temperature	70°C

applications and ratings (CR2A)

Part Designation	Capacitor Item	Capacitor Rating	Resistor Item	Resistor Rating
CR2A	Capacitance Measuring Condition	1 KHz ± 10% (1 Vrms ± 0.2V)	Power Rating	0.063W
	Voltage Rating	25V (DC)	Maximum Working Voltage	7.9V
	Capacitance Tolerance	±20% / ±30%	Maximum Overload Voltage	15.8V
	Temperature Coefficient	+20% / -55% (-25°C to +85°C)	Temperature Coefficient	±200ppm/°C
	Dissipation Factor	3% Maximum (at 1 KHz 1.0 Vrms)	Resistor Tolerance	±5%
	Insulation Resistance	1,000MΩ Minimum	Rated Ambient Temperature	+70°C
	Dielectric Withstanding Voltage	62.5V DC, 5 sec., 50mA charge	Operating Temperature Range	-25°C to +85°C
	Operating Temperature Range	-25°C to +85°C	Resistor Range	22Ω,47Ω,100Ω, 220Ω,470Ω, 1KΩ, 47KΩ
	Capacitance Range	22pF, 47pF, 100pF		

environmental applications

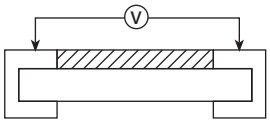
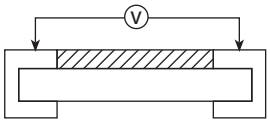
Derating Curve



Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use. 12/31/08

environmental applications (continued)

Performance Characteristics

Parameter	Requirement	Test Method
Insulation Resistance	More than 10^3 MΩ	Within 2 minutes at DC 25V between terminal and another 
Dielectric Withstanding Voltage	No evidence of flaming, fuming or breakdown	2.5 times maximum rated voltage for 5 seconds with 50 mA maximum charging current 
Resistance to Solder Heat	No evidence of damage ΔC within ±20% ΔR within ±5% D.F. within 5% I.R. more than 100 MΩ	Immerse in solder (H63A) @ 260° ± 5°C for 10 seconds ± 1 second Measurement shall be done 24 hours ± 4 hours @ room condition after test.
Solderability	Approximately 95% of the terminal should be covered with new solder	Immerse in solder (H63A) @ 235° ± 5°C for 3 seconds ± 0.5 second
Terminal Strength (Bend Test)	No mechanical damage	Specimen shall be soldered on PCB and support by applying strength so that the bending width becomes 3mm
Resistance to Solvents	No mechanical damage	Immerse in the IPA @ 20°C to 25°C for 60 seconds ± 10 seconds
Vibration	No evidence of damage	2 hours in each direction of X, Y, Z on PCB at a frequency range of 10 - 55 - 10Hz with 1.5mm amplitude. Measurement shall be done 24 hours ± 4 hours @ room condition after test.
Temperature Cycling	No evidence of damage ΔC within ±20% ΔR within ±5% D.F. within 5% I.R. more than 100 MΩ	100 cycles between -25°C/30 minutes and +85°C/30 minutes Measurement shall be done 24 hours ± 4 hours @ room condition after test.
Humidity (No Load)	No evidence of damage ΔC within ±20% ΔR within ±5% D.F. within 5% I.R. more than 100 MΩ	MIL-STD-202F, Method 106, 10 cycles Measurement shall be done 24 hours ± 4 hours @ room condition after test.
Moisture Resistance	No evidence of damage ΔC within ±20% ΔR within ±5% D.F. within 5% I.R. more than 100 MΩ	40°C ± 2°C, 90 - 95% RH, 500 hours Capacitor: DC 25V, 500 hr ON Resistor: Rated working voltage, 1.5 hr ON, 0.5 hr OFF Measurement of capacitor shall be done 24 hours ± 4 hours @ nominal condition after test.
Load Life	No evidence of damage ΔC within ±20% ΔR within ±5% D.F. within 5% I.R. more than 100 MΩ	85°C ± 2°C, 1000 hours Capacitor: DC 25V, 1000 hr ON Resistor: Rated working voltage, 1.5 hr ON, 0.5 hr OFF Measurement of capacitor shall be done 24 hours ± 4 hours @ nominal condition after test.