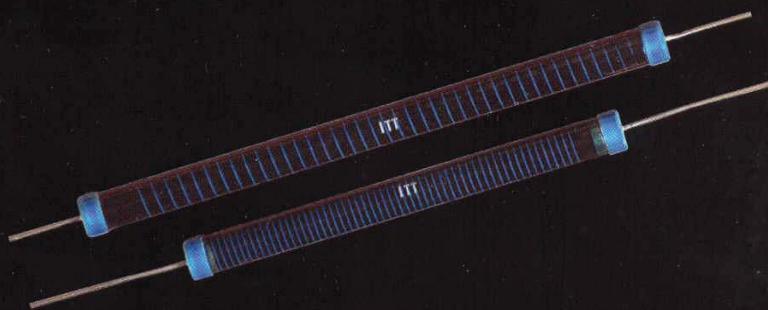




ITT

Power Solutions

Precision Metal Oxide High-Voltage and Power Resistors



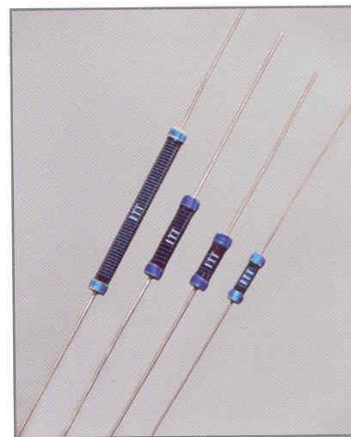
Engineered for life



Cylindrical Resistors

Features:

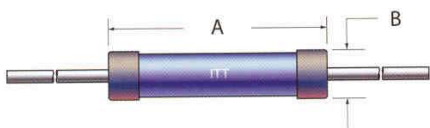
- Tinned copper leads .020" or .032" standard. Other lead materials available.
- 60/40 solder coated lead leads available
- Coatings: Epoxy varnish (standard)
Silicone
Vacuum compatible glass (some sizes)
- Voltage coefficient typically < 5ppm/v in mid resistance values
- Custom TCR available on request
- Other specialized testing available
- Family of products are available for RoHS compliance



Specifications:



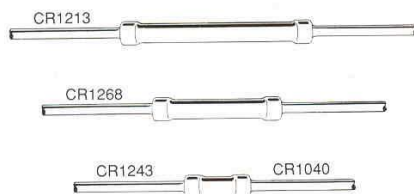
Type	Resistance (Ohms)		Power @ 70° C (Watts)	Maximum Operating Voltage	Tolerance @ 25 VDC	Maximum Surface Temp.	Max. Dimensions (inches)	
	Min.	Max.					A	B
CR1040*	1M	5G	0.75	2,000 V	1%, 2%, 5%	220° C	0.460	0.145
CR1243	1M	10G	1.00	2,500 V	1%, 2%, 5%	220° C	0.500	0.170
CR1268	1M	20G	1.50	5,000 V	1%, 2%, 5%	220° C	0.750	0.170
CR1213	1M	100G	2.00	10,000 V	1%, 2%, 5%	220° C	1.500	0.170



Temperature Coefficient +25°C to +125°C	CR1040 Range (OHMS)	CR1243 Range (OHMS)	CR1268 Range (OHMS)	CR1213 Range (OHMS)
+/-100 PPM/°C	1M-95M	1M-95M	100K-195M	100K-350M
+/-200 PPM/°C	100M-950M	100M-2.5G	200M-5.5G	400M-11G
+/-1000 PPM/°C	1G-5G	3G-10G	6G-20G	12G-100G

*=available with .02 diameter lead only

How to Order:



C	R	1213	V	92M5	F	2	HOW TO ORDER BY PART NUMBER
							END TERMINATION/LEAD STYLE: 1=.02 dia. wire, 2=.032 dia. wire, 3=nickel cap & lead* 6=.02 dia. wire*, 7=.032 dia. wire*
							TOLERANCE: M=20%, L=15%, K=10%, J=5%, G=2%, F=1%, S=special
							RESISTANCE VALUE: K= kilohms, M= megohms, G= gigohms, T= terohms, letter is placed to indicate decimal point. Use resistance total for dividers, sales to assign 4-digit code for networks.
							COATING: V=varnish, S=silicone, N=no coating, G=glass

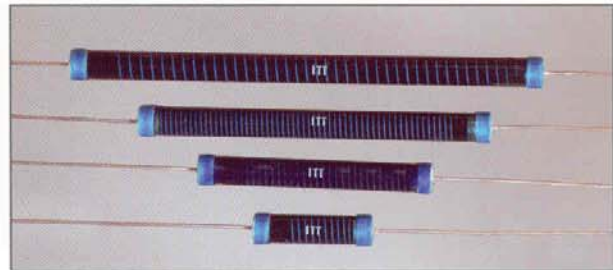
*=lead-free

KOBRA™ Precision Metal Oxide

Power Resistors

Features:

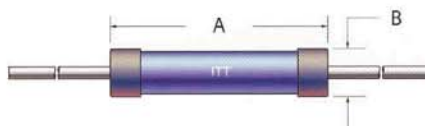
- Tinned copper leads .032" standard.
Other lead materials available.
- 60/40 solder coated lead wire available
- Coatings: Epoxy varnish (standard)
Silicone
- Voltage coefficient typically, <5ppm/v in mid resistance values
- Custom TCR available on request
- Other specialized testing available
- Family of products are available for RoHS compliance



Specifications:

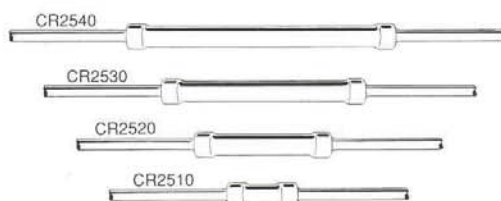


Type	Resistance (Ohms)		Power @ 70°C (Watts)	Maximum Operating Voltage	Tolerance @ 25 VDC	Maximum Surface Temp.	Max. Dimensions (inches)	
	Min.	Max.					A	B
CR2510	100K	5G	4	8,000 V	1%, 2%, 5%	220° C	1.125	0.325
CR2520	100K	10G	7	16,000 V	1%, 2%, 5%	220° C	2.125	0.325
CR2530	100K	15G	10	24,000 V	1%, 2%, 5%	220° C	3.125	0.325
CR2540	100K	20G	12	32,000 V	1%, 2%, 5%	220° C	4.125	0.325



Temperature Coefficient +25°C to +125°C	CR2510 Range (OHMS)	CR2520 Range (OHMS)	CR2530 Range (OHMS)	CR2540 Range (OHMS)
±150 PPM/°C ±200 PPM/°C	100K-450M 500M-5G	100K-950M 1G-10G	100K-1.0G 1.5G-15G	100K-1.5G 2G-20G

How to Order:



C	R	2530	V	92M5	F	2	HOW TO ORDER BY PART NUMBER
							END TERMINATION/LEAD STYLE: 2 = .032 dia. wire, 3 = nickel cap & lead* 7 = .032 dia. wire*
							TOLERANCE: M=20%, L=15%, K=10%, J=5%, G=2%, F=1%, S=special
							RESISTANCE VALUE: K= kilohms, M= megohms, G= gigohms, T= terohms, letter is placed to indicate decimal point. Use resistance total for dividers, sales to assign 4-digit code for networks.
							COATING: V=varnish, S=silicone, N=no coating.

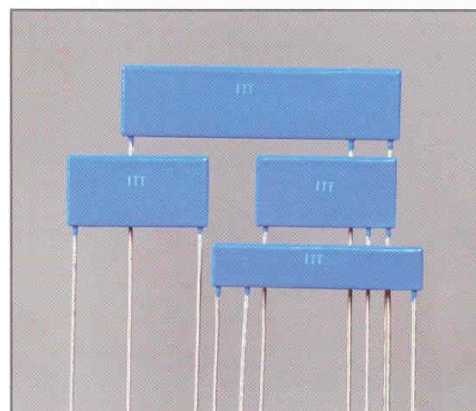
*=lead-free 

Wide High Voltage Resistors

Flat Resistors, Resistor Dividers

Features:

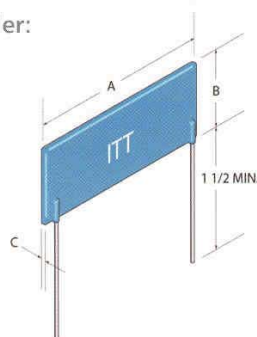
- Tolerances: 1%, 2%, 5%, 10%, and 15%
- Tinned copper leads .032" standard. Also available without leads and with 60/40 solder coated leads.
- Coating: Conformal Epoxy (standard)
- Custom TCR available on request
- Other specialized testing available
- FD distinguishes between regular or divider part number
- Family of products are available for RoHS compliance



Type	Resistance (Ohms)		Power @ 70° C	Maximum Operating Voltage	Maximum Surface Temp.	Max. Dimensions (inches)		
	Min.	Max.				A	B	C
FR or FD0315	100K	5G	2	12,000 V	150° C	1.550	0.350	0.110
FR or FD0510	100K	5G	2	10,000 V	150° C	1.050	0.550	0.110
FR or FD0520	100K	5G	4	20,000 V	150° C	2.050	0.550	0.110
FR or FD1020	100K	10G	6	30,000 V	150° C	2.050	1.050	0.110

Temperature Coefficient +25° C to +125° C	FR0315 Range (OHMS)	FR0510 Range (OHMS)	FR0520 Range (OHMS)	FR1020 Range (OHMS)
±100 PPM/°C ±250 PPM/°C	100K-450M 500M-5G	100K-450M 500M-5G	100K-450M 500M-5G	100K-950M 1G-10G

How to Order:



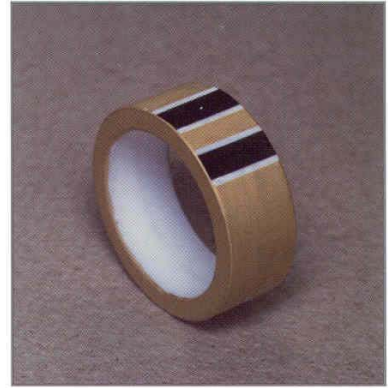
F	R	0520	E	92M5	F	2	HOW TO ORDER BY PART NUMBER
							END TERMINATION/LEAD STYLE: 1=.02 dia. wire, 2=.032 dia. wire, 3=nickel cap & lead* 6=.02 dia. wire*, 7=.032 dia. wire*
							TOLERANCE: M=20%, L=15%, K=10%, J=5%, G=2%, F=1%, S=special
							RESISTANCE VALUE: K= kilohms, M= megohms, G= gigohms, T= terohms, letter is placed to indicate decimal point. Use resistance total for dividers, sales to assign 4-digit code for networks.
							COATING: N=no coating, E=epoxy

*=lead-free

Ring Resistors

Features:

- A wide range of ring sizes and resistance values available
- Thick film systems on high Alumina ceramic rings
- Typical tolerances range from 3 to 10%
- Low noise, highly reliable and accurate
- One piece ceramic construction



Custom R&D Engineering of Materials and Process Capabilities

Features:

- Several high Alumina compositions possible
- Custom sizes and shapes (pressing and extrusion)
- Machining to close tolerances
- Custom low- and high-resistance
- Flat voltage dividers and resistor networks available
- Custom lead forming



Industries Served:

- Electrostatic Discharge
- High Power Controls
- High Voltage Power Supply
- Mass Spectroscopy
- Scientific Instrumentation
- Test Equipment
- X Ray

Please contact us with your application and specification :

by email-
by telephone-
by fax-

info@ittpowersolutions.com
800 442.4334, 413 263.6200
413 263.6359



About ITT, Power Solutions

ITT's Power Solutions offers over 30 years experience in the design and manufacture of custom high to low voltage DC/DC and AC/DC power supplies for miniaturized, high-reliability commercial and military applications.

ITT is a worldwide leading supplier of CERAMAX™ channel electron multipliers, KOBRA™ High Voltage Resistors, and other high-reliability electronic components. Our design and manufacturing success has led us to be the number one OEM supplier of night vision image intensification high voltage power supplies as well as the world's number one supplier of channel electron multipliers to OEM's.

Our products are installed in military (avionic, command centers, communications, displays, ground vehicles, missiles/munitions, missile warning, navigation, night vision, radar, space, and surveillance/observation) image intensification, mass spectrometry and analytical instrumentation equipment worldwide.

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