SCPA / SCTA

Leadless Cylindrical Thick-Film Non-Inductive High-Voltage Resistors

Features

- Leadless cylindrical thick-film, non-inductive design.
- High mechanical strength and high thermal capacity compared with flat high-voltage resistors.
- Good switching and pulse performance.
- High-quality ceramic substrate for good thermal conductivity.
- SCPA / SCTA are threaded-end versions of SCP / SCT, using M4 nut end caps in place of leaded caps.



General Specifications

Parameter	Specification
Resistance range	See model tables; other values on request
Tolerance	±0.1% to ±10%
TCR	SCPA: ±80 ppm/°C; SCTA: down to ±25 ppm/°C; 25°C to 105°C
Voltage coefficient	See voltage-coefficient curves
Dielectric withstand	1000 V DC
Insulation resistance	10 GΩ minimum
Overload	5 times rated power, not exceeding 1.5 times maximum continuous working voltage, for 5 s; ΔR≤±0.5%R0
Load life	1000 h at rated power; ΔR≤±0.50%R0
Moisture resistance	MIL-STD-202, Method 106; ΔR≤±0.40%R0
Thermal shock	MIL-STD-202, Method 107, Condition C; ΔR≤±0.25%R0
Coating	Silicone resin
Terminal mounting	Standard M4 screws; M8 for SCP214A only
End caps	Brass M4 nuts; M8 for SCP214A only

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SCTA Technical Ratings

Model	W at 125°C	Max. cont. kV	Min. Ω	S min. Ω	Max. Ω (1%)
SCT26A	1.0	4.0	100K	40M	250M
SCT32A	1.25	5.0	120K	50M	300M
SCT39A	1.5	6.0	150K	60M	400M
SCT52A	2.0	10.0	200K	80M	500M
SCT78A	3.0	15.0	300K	120M	700M
SCT103A	4.0	20.0	400K	160M	1G
SCT124A	5.0	25.0	500K	190M	1G
SCT154A	6.0	30.0	600K	250M	1G

SCPA Technical Ratings

Model	W at 25°C	W at 75°C	W at 125°C	Max. cont. kV	S max. kV	Min. Ω (1%)	Max. Ω (1%)	Max. Ω (2%)
SCP20A	2.5	2.5	1.5	3.0	4.8	200	25M	1G
SCP26A	3.7	3.7	2.5	4.0	6.4	250	300M	1G
SCP32A	4.5	4.5	3.0	5.0	8.0	300	400M	1.5G
SCP39A	5.2	5.2	3.5	8.0	12.8	400	500M	1.5G
SCP52A	7.5	7.5	5.0	10.0	16.0	500	750M	2.5G
SCP78A	11	11	7.5	15.0	24.0	900	1G	4G
SCP103A	12	12	8.0	20.0	32.0	1K5	1G	2G
SCP124A	15	15	10.0	25.0	40.0	2K5	2G	8G
SCP154A	20	20	15.0	30.0	48.0	2K0	2G	10G
SCP214A	60	60	50	50	—	1K	3G	10G

Resistance notation: K = 10^3, M = 10^6, G = 10^9; e.g. 1K2 = 1.2 kΩ. A dash indicates no value specified in the source.

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Outline Dimensions



A: body length; B: body diameter. Dimensions below retain source millimetre/inch values.

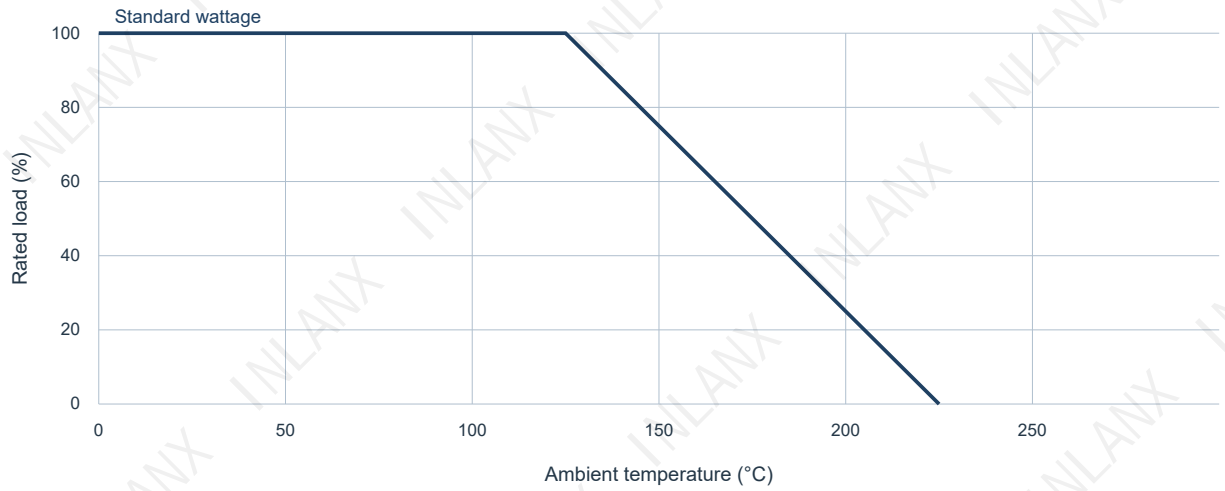
Model	A (mm)	A (in)	B (mm)	B (in)
SCP20A	27.3	1.074	8.20	0.323
SCP26A	33.7	1.326	8.20	0.323
SCP32A	39.5	1.555	8.20	0.323
SCP39A	46.2	1.818	8.20	0.323
SCP52A	58.5	2.303	8.20	0.323
SCP78A	84.5	3.326	8.20	0.323
SCP103A	110.0	4.330	8.20	0.323
SCP124A	130.7	5.145	8.20	0.323
SCP154A	160.7	6.326	8.20	0.323
SCP214A	214	8.425	21	0.826
SCT26A	33.7	1.326	8.20	0.323
SCT32A	39.5	1.555	8.20	0.323
SCT39A	46.2	1.818	8.20	0.323
SCT52A	58.5	2.303	8.20	0.323
SCT78A	84.5	3.326	8.20	0.323
SCT103A	110.0	4.330	8.20	0.323
SCT124A	130.7	5.145	8.20	0.323
SCT154A	160.7	6.326	8.20	0.323

Tolerances: A ±1.0 mm / ±0.04 in; B ±0.50 mm / ±0.02 in. Standard threaded mounting: M4; M8 is specified only for SCP214A.

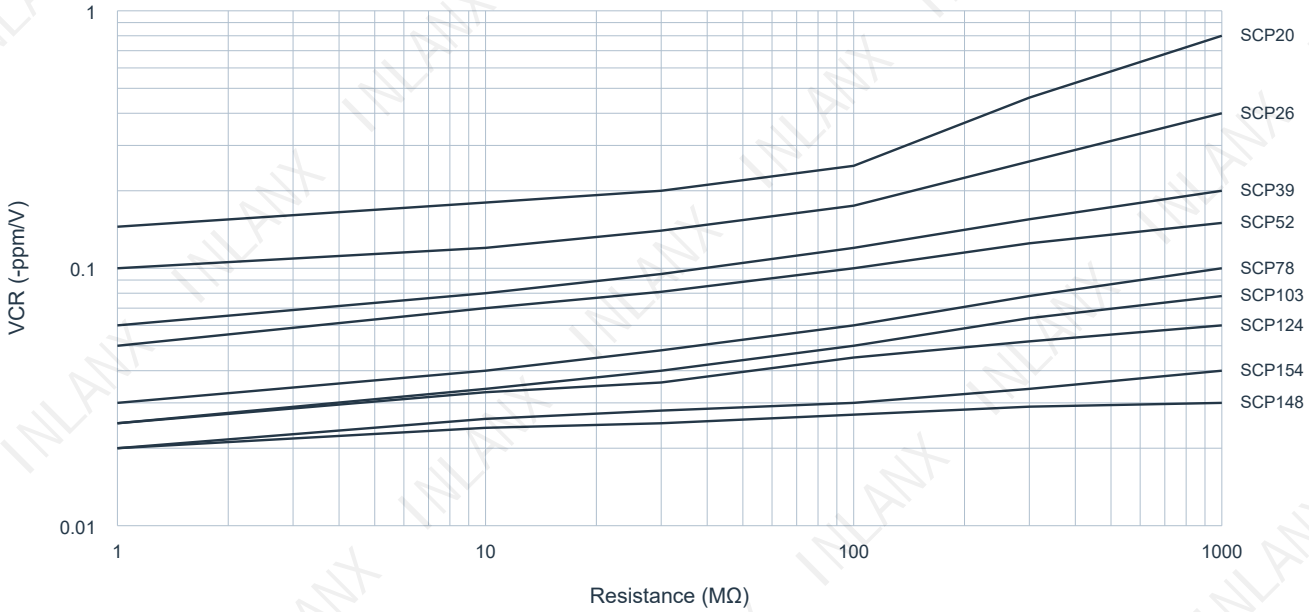
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Power Derating



Voltage Coefficient



The curve identifiers are retained from the source chart (SCP20 to SCP148).

Ordering Example

SCP214A | 150K | 1% | 80 ppm/°C