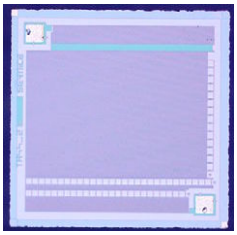
High Value (up to 100 MΩ) Wirebondable 1 mm² Thin Film Chip Resistors



FEATURES

- Small size 40 mil x 40 mil (1 mm x 1 mm)
- Very high ohmic value up to 100 MΩ
- Good stability 0.1 % (2000 h, rated power at +70 °C)
- Aluminum or gold terminations
- Wirebondable
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

DESIGN SUPPORT TOOLS

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3D Models Available

Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. These high ohmic value chip resistors are available with improved performances and size when compared to thick film counterparts.

SCHEMATIC

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER $P_{70\,°C}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
CS44	0404	400K to 100M	0.380	100	0.5, 1.0, 2.0, 5.0	50 (1), 100

Note

(1) On request

CLIMATIC SPECIFICATIONS

Operating temperature range	-55 °C to +155 °C
Storage temperature range	-55 °C to +155 °C

MECHANICAL SPECIFICATIONS

Resistive element	Chromium Silicon
Passivation	Silicon Nitride
Substrate material	Silicon (consult Vishay for Al_2O_3)
Bonding pads	Aluminum or gold

TECHNICAL SPECIFICATIONS

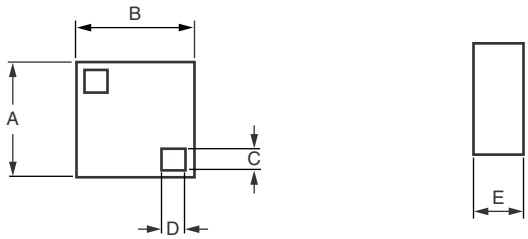
TEST	SPECIFICATIONS	CONDITIONS
MATERIAL	**PASSIVATED CHROMIUM SILICON**	
Stability	± 0.1 % typical, ± 0.2 maximum	2000 h at +70 °C at Pn
Limiting voltage	100 V_{DC}	Higher on Al_2O_3
Noise	< - 20 dB typical	MIL-STD-202 method 308
Thermal EMF	< 0.01 µV/°C	
Shelf life stability	200 ppm	1 year at +25 °C

Note

- Rated voltage = $\sqrt{(\text{Power rating x Resistance value})}$ or limiting voltage, whichever is lower

For technical questions, contact: sferthinfilm@vishay.com

DIMENSIONS



DIMENSION	INCHES	MILLIMETERS
A	0.043 ± 0.002	1.09 ± 0.05
B	0.043 ± 0.002	1.09 ± 0.05
C	0.004	0.10
D	0.004	0.10
E	0.015	0.40 max.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CS44-100MJ0099

C	S	4	4	-	1	0	0	M	J		0	0	9	9

GLOBAL MODEL	VALUE	TOLERANCE	TERMINATIONS	OPTION
	Decimal K or M	**D** = ± 0.5 % **F** = ± 1.0 % **G** = ± 2.0 % **J** = ± 5.0 %	Blank = aluminum **G** = gold	Leave blank if no option

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