1 mm<sup>2</sup> Thin Film Chip Resistors **FEATURES** 



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

GREEN (5-2008)

performances and size when compared to thick film counterparts. SCHEMATIC R ww

STANDARD ELECTRICAL SPECIFICATIONS						
MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER P <sub>70 °C</sub> 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 <sup>(1)</sup> , 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 <sub>2</sub> O <sub>3</sub> )			
Bonding pads	Aluminum			

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 <sub>DC</sub>	Higher on Al <sub>2</sub> O <sub>3</sub>		
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 =  $\sqrt{(Power rating x Resistance value)}$  or limiting voltage, whichever is lower

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RoHS

COMPLIANT

HALOGEN FREE

**Vishay Sfernice** 

## www.vishay.com High Value (Up to 100 M $\Omega$ ) Wirebondable

LINKS TO ADDITIONAL RESOURCES



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

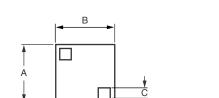


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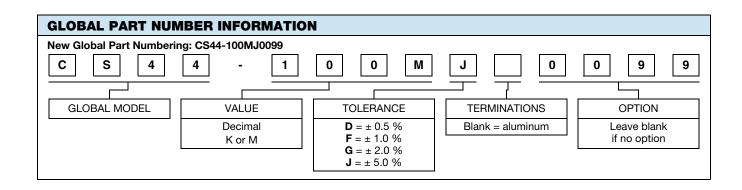
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DIMENSIONS

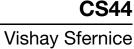


- D

DIMENSION	INCHES	MILLIMETERS	
А	$0.043 \pm 0.002$	$1.09 \pm 0.05$	
В	0.043 ± 0.002	$1.09 \pm 0.05$	
С	0.004	0.10	
D	0.004	0.10	
E	0.015	0.40 max.	



Е





Vishay

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