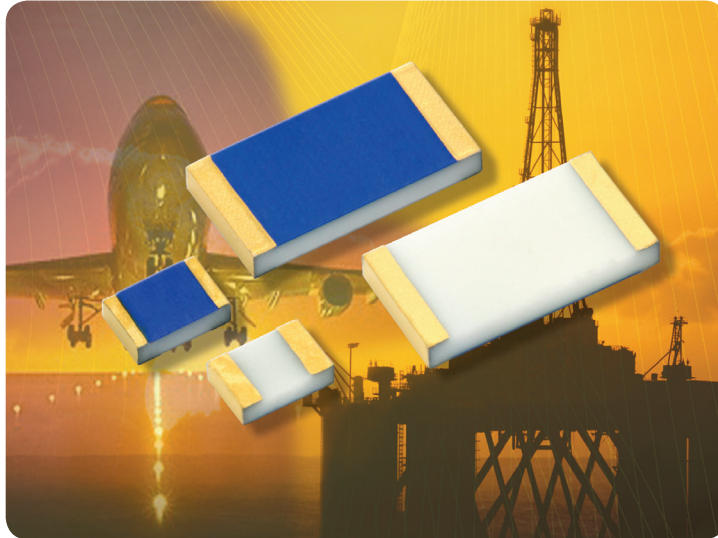


## High-Temperature (245 °C) Thick Film Chip Resistor



### KEY BENEFITS

- Operating temperature range: - 55 °C to + 230 °C
- Storage temperature range: - 55 °C to + 245 °C
- Ohmic range: 0.1 Ω to 100 MΩ
- Sizes: 0603, 0805, 1206, and 2010, with others available on request
- Compatible high melting point (HMP) process

### APPLICATIONS

- Multi-chip modules (MCM)

### END PRODUCT

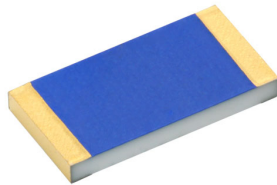
- Down hole drilling instruments used during extraction

### RESOURCES

- Datasheet: CHPHT - [www.vishay.com/doc?52032](http://www.vishay.com/doc?52032)
- Capabilities brochure: [www.vishay.com/doc?49025](http://www.vishay.com/doc?49025)
- For technical questions, contact: [sfer@vishay.com](mailto:sfer@vishay.com)



## High-Temperature (245 °C) Thick Film Chip Resistor



### TERMINATIONS

- **N (W/A):** SnAg over nickel barrier for temperature up to 200 °C
- **G (W/A) type:** Gold (< 1 μm) over nickel barrier for temperature up to 245 °C

### Note

- Refer to Application Note “Guidelines for Vishay Sfernice Resistive and Inductive Components” (document number: 52029) for recommended reflow profile. Profile #3 applies.

For applications such as down hole applications or aircraft braking systems, the need for parts able to withstand very severe conditions (temperature as high as 230 °C powered or up to 245 °C un-powered) has prompted Vishay Sfernice to extend the capabilities of its thick film technology. The application note “Power Dissipation Considerations in High Precision Vishay Sfernice Thin Film Chips Resistors and Arrays (P, PRA etc.) (High Temperature Applications)” ([www.vishay.com/doc?53047](http://www.vishay.com/doc?53047)) provides additional information on how to obtain the best performance from the CHPHT.



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

Vishay Sfernice R&D engineers are available to support any special customer design requirements.

### ELECTRICAL SPECIFICATIONS

CASE SIZE	POWER RATING Pn mW (at 230 °C)	LIMITING ELEMENT VOLTAGE V	MAX. OVERLOAD VOLTAGE V	RESISTANCE RANGE <sup>(1)</sup> Ω
0603	12.5	50	100	0R1 to 25M
0805	20	150	300	0R1 to 25M
1206	25	200	400	0R1 to 50M
2010	100	200	400	0R21 to 100M

### Notes

- Other sizes upon request
- (1) Shall be read in conjunction with other tables

### CLIMATIC SPECIFICATIONS

Operating temperature range: - 55 °C to + 230 °C

Storage temperature range: - 55 °C to + 245 °C

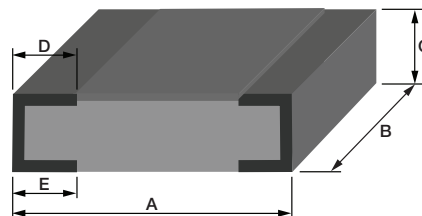
### PACKAGING

ESD packaging available: Waffle pack and plastic tape and reel (low conductivity). Paper tapes available on request (ESD only). (For 0603, 0805, and 1206 only.)

### BEST TOLERANCE AND TCR VS. OHMIC VALUE

TIGHTEST TOLERANCE	OHMIC VALUES	BEST TCR ppm/°C
1 % (F)	5 Ω < R < 10M	100 (K)
2 % (G)	1 Ω < R < R max.	200 (L)
5 % (J)	0.1 Ω < R < R max.	200 (L)

### DIMENSIONS in millimeters



Revision: 16-Nov-11

CASE SIZE	A	B	C	D	E
	± 0.152	± 0.127	± 0.127	± 0.127	± 0.127
0603	1.60	0.90	0.38	0.31	0.40
0805	1.85	1.25	0.38	0.31	0.50
1206	3.00	1.73	0.38	0.40	0.50
2010	5.03	2.64	0.50	0.50	0.50