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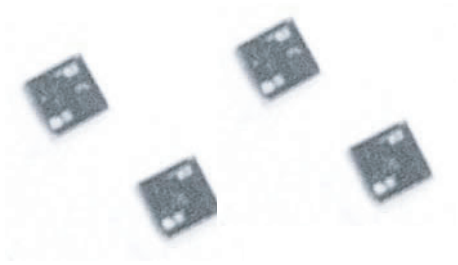
TA22

Vishay Sfernice

Single Value Wirebondable Thin Film Chip Resistors



Actual Size

FEATURES

- Small size 20 mil square
- Resistance range 10 Ω to 1 MΩ
- Resistor material: self-passivating tantalum nitride
- Silicon substrate for good power dissipation
- Wirebondable
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

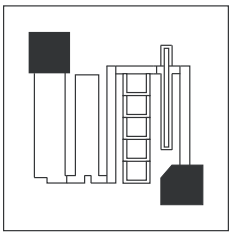
Pb-free
RoHS COMPLIANT
HALOGEN FREE
GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models

Thin film resistors are often an excellent solution for analog design problems where space is limited and high packing density is required. Due to their Tantalum Nitride resistive layer these resistors are stable 0.07 % (2000 h, rated power at +70 °C) and moisture resistant.

SCHEMATIC AND PATTERN



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE Ω	RATED POWER $P_{70\,°C}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
TA22	0202	10 to 1M	0.05	100	0.5, 1.0, 2.0	50 (1), 100

Note
(1) On request

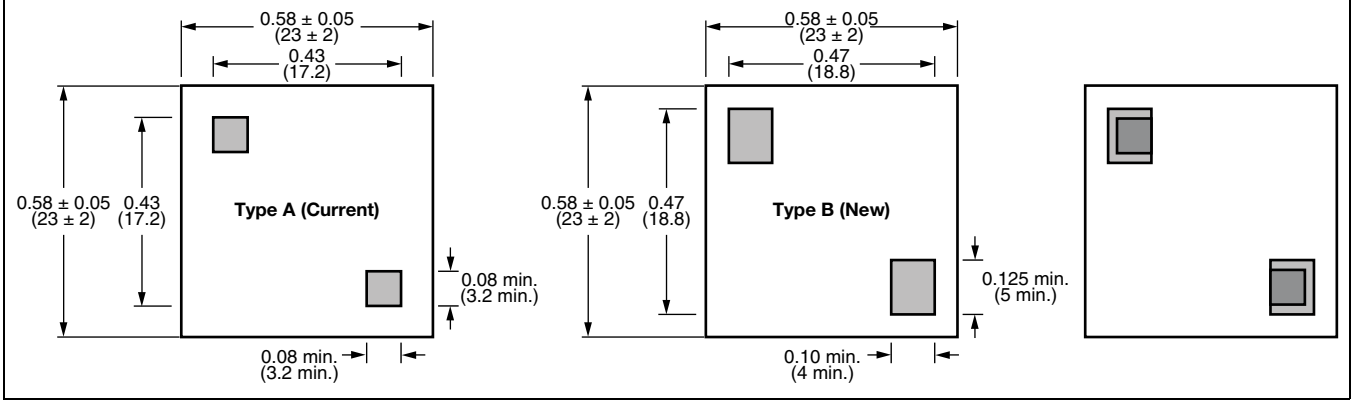
CLIMATIC SPECIFICATIONS

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

MECHANICAL SPECIFICATIONS

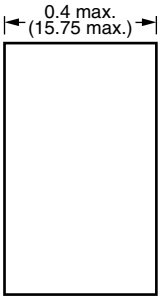
Resistive element	Tantalum nitride
Passivation	Tantalum pentoxide (autopassivation)
Substrate material	Standard silicon
Bonding pads	Aluminum

DIMENSIONS in millimeters (mils)



Note
- Customer can get one or the other part, but positions of pads are similar

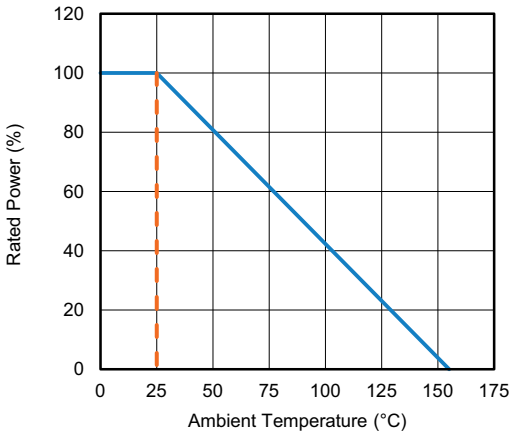
DIMENSIONS in millimeters (mils)



TECHNICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
MATERIAL	**TANTALUM NITRIDE**	
Power dissipation	100 mW at 25 °C, 50 mW at +70 °C, 25 mW at +125 °C	
Stability	± 0.07 % typical, ± 0.1 maximum	2000 h at +70 °C at Pn
Voltage coefficient	< 0.1 ppm/V	
Noise	< -35 dB typical	MIL-STD-202 method 308
Thermal EMF	< 0.01 µV/°C	
Shelf life stability	100 ppm	1 year at +25 °C

DERATING



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: TA22-100KD0016 (preferred part number format)

T	A	2	2	-	1	0	0	K	D	0	0	1	6

GLOBAL MODEL	VALUE	TOLERANCE	OPTION
	Decimal R, K, or M	**D** = ± 0.5 % **F** = ± 1.0 % **G** = ± 2.0 %	Leave blank if no option

Historical Part Number Example: TA22 10K 0.5 % R0016 (will continue to be accepted)

TA22	10K	0.5 %	R0016
HISTORICAL MODEL	VALUE	TOLERANCE	OPTION

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