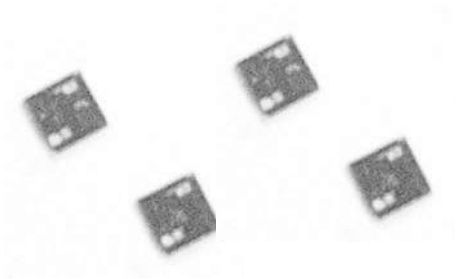
Single Value Chip Resistor



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
- Low cost
- Wirebondable

Pb-free

RoHS COMPLIANT

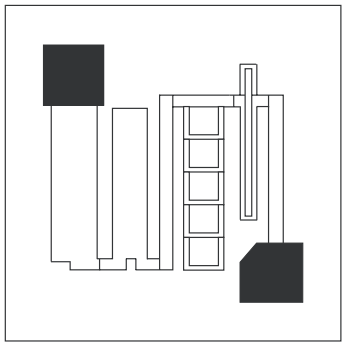
GREEN (5-2008)*

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.

TYPICAL PERFORMANCE

	ABS
TCR	100 ppm/°C
TOL.	0.5 %

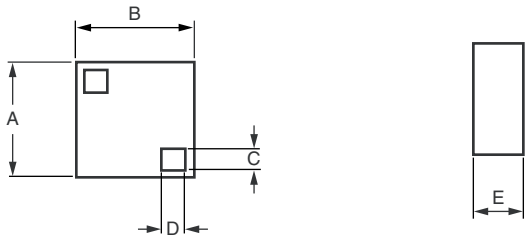
SCHEMATIC AND PATTERN



STANDARD ELECTRICAL SPECIFICATIONS		
TEST	**SPECIFICATIONS**	**CONDITIONS**
MATERIAL	**TANTALUM NITRIDE**	
Resistance range	10 Ω to 1 MΩ	
Absolute TCR	± 100 ppm/°C (± 50 ppm/°C on request)	- 55 °C to + 155 °C
Absolute tolerance	± 0.5 %, ± 1 %, ± 2 %	
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	
Working voltage	50 V_{DC}	
Operating temperature range	- 55 °C to + 155 °C	
Storage temperature range	- 55 °C to + 155 °C	
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

* Please see document “Vishay Green and Halogen-Free Definitions (5-2008)” http://www.vishay.com/doc?99902

DIMENSIONS



DIMENSION	INCHES	MILLIMETERS
A	0.021 ± 0.002	0.55 ± 0.10
B	0.021 ± 0.002	0.55 ± 0.10
C	0.004	0.10
D	0.004	0.10
E	0.015	0.40 maximum

MECHANICAL SPECIFICATIONS	
Resistive element	Tantalum Nitride
Passivation	Tantalum Pentoxide (Autopassivation)
Substrate material	Standard Silicon
Bonding pads	Aluminum

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

Disclaimer

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