

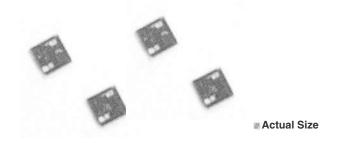
Rohs

COMPLIANT

GREEN

(5-2008)

Single Value Chip Resistor



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.

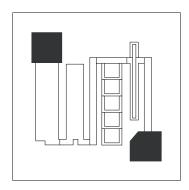
SCHEMATIC AND PATTERN



- Small size 20 mil square
- Resistance range 10 Ω to 1 $M\Omega$
- Resistor material: self-passivating Tantalum Nitride
- Silicon substrate for good power dissipation
- Low cost
- Wirebondable

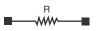
TYPICAL PERFORMANCE

	ABS	
TCR	100 ppm/°C	
TOL.	0.5 %	



STANDARD ELECTRICAL SPECIFICATIONS			
TEST	SPECIFICATIONS	CONDITIONS	
MATERIAL	TANTALUM NITRIDE		
Resistance range	10 Ω to 1 M Ω		
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

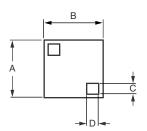


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DIMENSIONS



E	

DIMENSION	INCHES	MILLIMETERS
А	0.021 ± 0.002	0.55 ± 0.10
В	0.021 ± 0.002	0.55 ± 0.10
С	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		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



Vishay

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