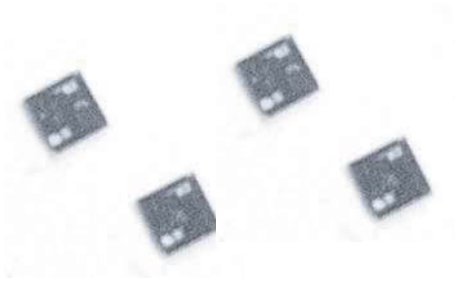
Single Value Chip Resistor



Actual Size

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 hours, rated power at 70 °C) and moisture resistant.

FEATURES

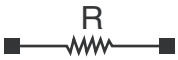
- Small size 20 mil square
- Resistance range 10 Ω to 1 MΩ
- Resistor material: self-passivating Tantalum nitride
- Silicon substrate for good power dissipation
- Low cost

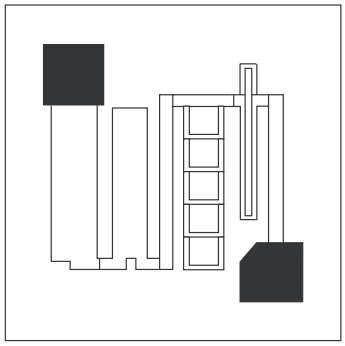
Pb-free
RoHS COMPLIANT

TYPICAL PERFORMANCE

	ABS
TCR	100 ppm/°C
TOL	0.5 %

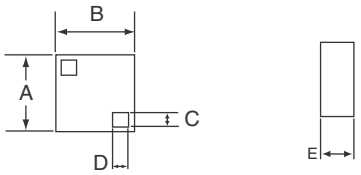
SCHEMATIC AND PATTERN





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 Max.	2000 hrs. at + 70 °C at Pn
Voltage Coefficient	< 0.1 ppm/Volt	
Working Voltage	50 Volts 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

DIMENSIONS in inches and millimeters



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 Max.

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

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