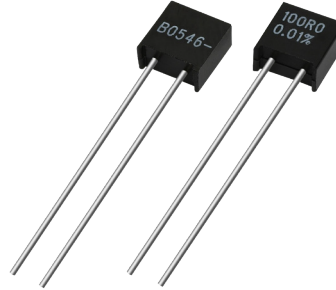


Ultra High Precision Z-Foil Miniature Resistor

TCR of ± 0.2 ppm/°C, PCR of 5 ppm at Rated Power and Tolerance to $\pm 0.01\%$

FEATURES

- Temperature coefficient of resistance (TCR):
 ± 0.2 ppm/°C typical (-55°C to $+125^{\circ}\text{C}$, $+25^{\circ}\text{C}$ ref.)
- Tolerance: to $\pm 0.01\%$
- Power coefficient of resistance (PCR)
"ΔR due to self heating": ± 5 ppm at rated power
- Electrostatic discharge (ESD) up to 25,000 V
- Resistance range: 5 Ω to 30 k Ω
- Power rating: 0.25 W at $+70^{\circ}\text{C}$; 0.125 W at $+125^{\circ}\text{C}$
- Load life stability: $\pm 0.01\%$ maximum ΔR at $+70^{\circ}\text{C}$ at rated power for 2000 h



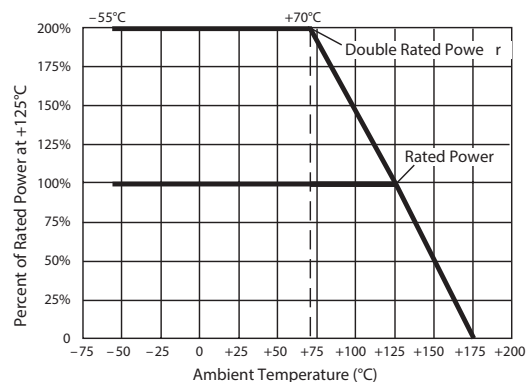
Available
RoHS*
COMPLIANT

Tolerance and TCR Versus

VALUE	STANDARD TOLERANCE	TYPICAL TCR AND MAXIMUM SPREAD -55°C to $+125^{\circ}\text{C}$ ($+25^{\circ}\text{C}$ Ref.)
50 Ω to 30 k Ω	$\pm 0.01\%$	$\pm 0.2 \pm 1.8$
20 Ω to <50 Ω	$\pm 0.02\%$	$\pm 0.2 \pm 2.8$
10 Ω to <20 Ω	$\pm 0.05\%$	$\pm 0.2 \pm 4.8$
5 Ω to <10 Ω	$\pm 0.1\%$	$\pm 0.2 \pm 6.8$

Imprinting and Dimensions

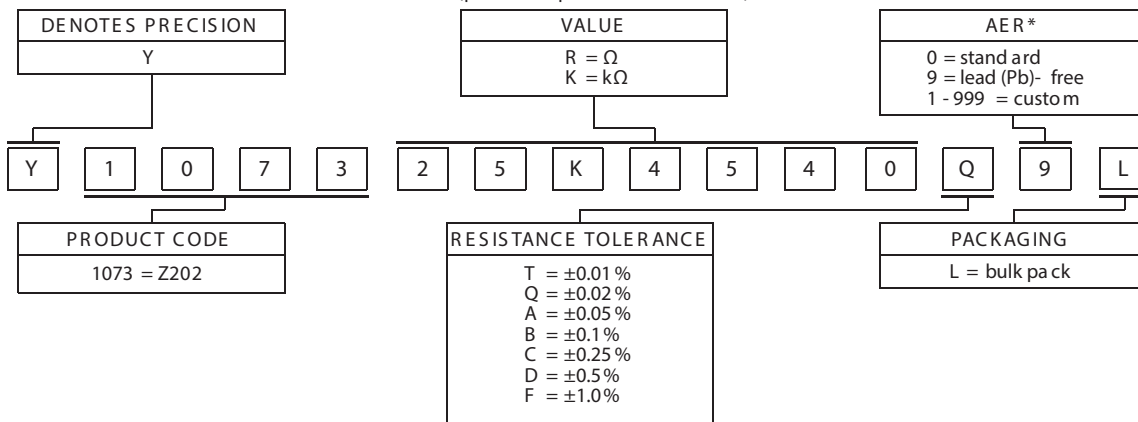
Imprinting and Dimensions		
Front View Date Code 07 45 Year Week For Lead (Pb)-free Option 0745 - Ⓟ Z202 ST LS L H W Lead Material #22 AWG (0.025 Dia.) Solder Coated Copper Rear View Resistance Value Code 100R01 0.01% Tolerance LL		
DIMENSIONS	INCHES	MILLIMETERS
L	0.250 $\pm$ 0.010	6.35 $\pm$ 0.25
H	0.250 $\pm$ 0.010	6.35 $\pm$ 0.25
W	0.125 $\pm$ 0.010	3.18 $\pm$ 0.25
ST	0.020 $\pm$ 0.010	0.51 $\pm$ 0.25
LL	0.750 minimum	19.05 minimum
LS	0.125 $\pm$ 0.005	3.18 $\pm$ 0.13

Power Derating Curve**Environmental Performance Comparison**

	MIL-PRF-55182 CHAR J	Z202	
		MAXIMUM ΔR	TYPICAL ΔR
Test Group I Thermal shock (5 × -65°C to +150°C) Short time overload (6.25 × P _{nom} × 5 s)	±0.2% ±0.2%	±0.01% (100 ppm) ±0.01% (100 ppm)	±0.005% (50 ppm) ±0.005% (50 ppm)
Test Group II Resistance temperature characteristic Low temperature storage Low temperature operation Terminal strength	±25ppm/°C ±0.15% ±0.15% ±0.2%	See table 1 ±0.01% (100 ppm) ±0.01% (100 ppm) ±0.01% (100 ppm)	±0.05ppm/°C (0°C to +60°C) ±0.002% (20 ppm) ±0.002% (20 ppm) ±0.002% (20 ppm)
Test Group III DWV Resistance to soldering heat Moisture resistance	±0.15% ±0.1% ±0.4%	±0.01% (100 ppm) ±0.01% (100 ppm) ±0.05% (500 ppm)	±0.002% (20 ppm) ±0.005% (50 ppm) ±0.01% (100 ppm)
Test Group IV Shock Vibration	±0.2% ±0.2%	±0.01% (100 ppm) ±0.01% (100 ppm)	±0.002% (20 ppm) ±0.002% (20 ppm)
Test Group V Life test at 0.125 W, 125°C for 2000 h	±0.5%	±0.025% (250 ppm)	±0.01% (100 ppm)
Test Group Va Life test at 0.25 W (2 × rated power), 70°C for 2000 h	±0.5%	±0.02% (200 ppm)	±0.01% (100 ppm)
Test Group VI High temperature exposure	±2.0%	±0.1% (1000 ppm)	±0.05% (500 ppm)

Global Part Number Information

NEW GLOBAL PART NUMBER: Y107325K45 40Q9L (preferred part number format)



FOR EXAMPLE: ABOVE GLOBAL ORDER Y1073 25K4540 Q 9 L:

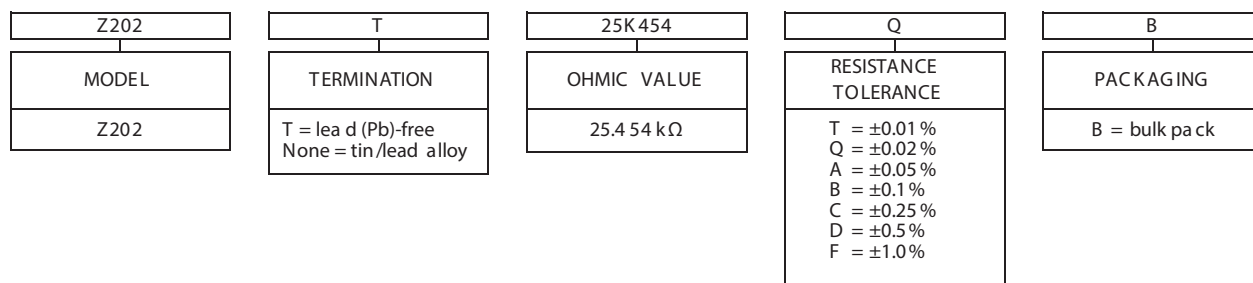
TYPE: Z202

VALUE: 25.454k Ω ABSOLUTE TOLERANCE: $\pm 0.02\%$

TERMINATION: lead (Pb)-free

PACKAGING: bulk pack

HISTORICAL PART NUMBER EXAMPLE: Z202T 25K45 4 Q B (will continue to be used)



Note

*For non-standard requests, please contact application engineering.