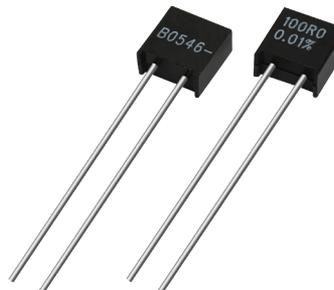


## Ultra High Precision Z-Foil Miniature Resistor

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

### FEATURES

- Temperature coefficient of resistance (TCR):  $\pm 0.2$  ppm/°C typical (-55°C to +125°C, +25°C ref.)
- Tolerance: to  $\pm 0.01\%$
- Power coefficient of resistance (PCR) "ΔR due to self heating":  $\pm 5$  ppm at rated power
- Electrostatic discharge (ESD) up to 25,000 V
- Resistance range: 5 Ω to 30 kΩ
- Power rating: 0.25 W at +70°C; 0.125 W at +125°C
- Load life stability:  $\pm 0.01\%$  maximum ΔR at +70°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°C (+25°C Ref.)
50 Ω to 30 kΩ	$\pm 0.01\%$	$\pm 0.2 \pm 1.8$
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	$\pm 0.1\%$	$\pm 0.2 \pm 6.8$

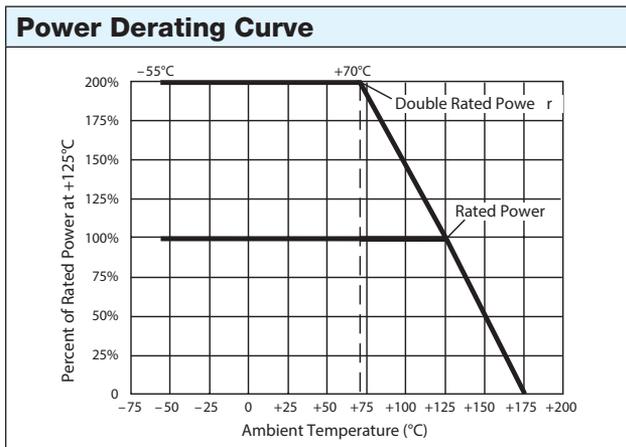
### Imprinting and Dimensions

Front View

Rear View

Lead Material  
#22 AWG (0.025 Dia.)  
Solder Coated Copper

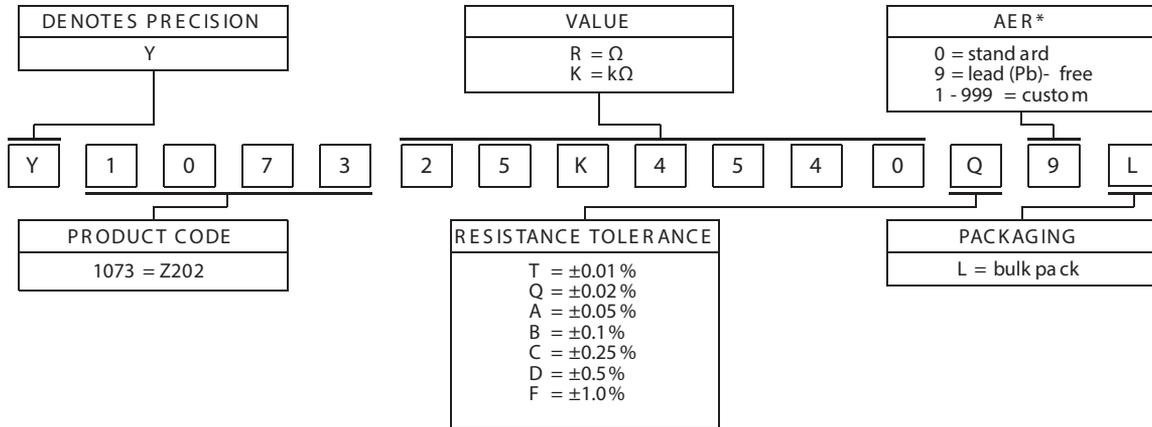
DIMENSIONS	INCHES	MILLIMETERS
L	0.250±0.010	6.35±0.25
H	0.250±0.010	6.35±0.25
W	0.125±0.010	3.18±0.25
ST	0.020±0.010	0.51±0.25
LL	0.750 minimum	19.05 minimum
LS	0.125±0.005	3.18±0.13



Environmental Performance Comparison			
	MIL-PRF-55182 CHAR J	Z202	
		MAXIMUM ΔR	TYPICAL ΔR
<b>Test Group I</b> Thermal shock (5 × -65°C to +150°C) Short time overload (6.25 × P <sub>nom</sub> × 5 s)	±0.2% ±0.2%	±0.01% (100 ppm) ±0.01% (100 ppm)	±0.005% (50 ppm) ±0.005% (50 ppm)
<b>Test Group II</b> 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)
<b>Test Group III</b> 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)
<b>Test Group IV</b> Shock Vibration	±0.2% ±0.2%	±0.01% (100 ppm) ±0.01% (100 ppm)	±0.002% (20 ppm) ±0.002% (20 ppm)
<b>Test Group V</b> Life test at 0.125 W, 125°C for 2000 h	±0.5%	±0.025% (250 ppm)	±0.01% (100 ppm)
<b>Test Group Va</b> Life test at 0.25 W (2 × rated power), 70°C for 2000 h	±0.5%	±0.02% (200 ppm)	±0.01% (100 ppm)
<b>Test Group VI</b> High temperature exposure	±2.0%	±0.1% (1000 ppm)	±0.05% (500 ppm)

## Global Part Number Information

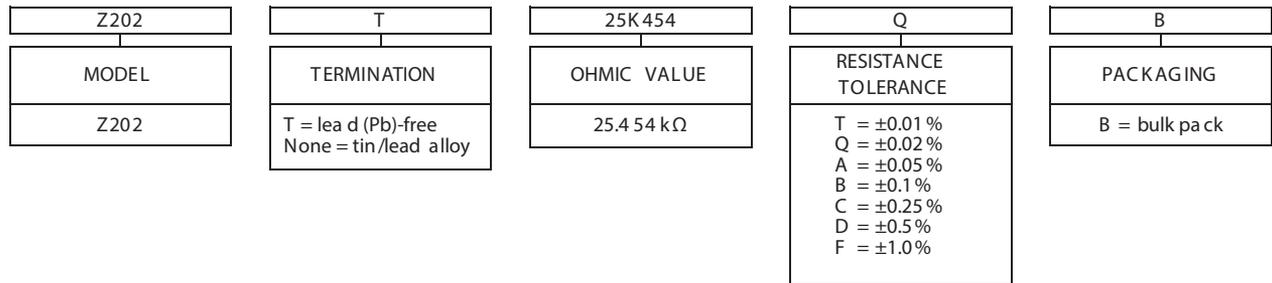
NEW GLOBAL PART NUMBER: Y107325K45 40Q9L (preferred part number format)



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

TYPE: Z202  
 VALUE: 25.454kΩ  
 ABSOLUTE TOLERANCE: ±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.