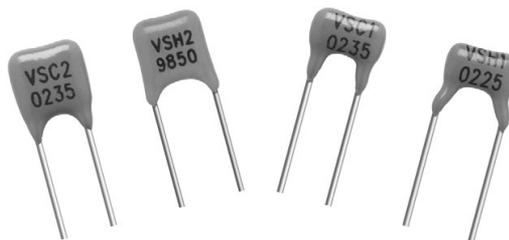


Bulk Metal® Foil Technology Low Profile Conformally Coated High Precision Resistor
 with Tight Tolerance from $\pm 0.01\%$ and Load Life Stability of $\pm 0.01\%$ and Instantaneous Thermal Stabilization

FEATURES

- Temperature coefficient of resistance (TCR): ± 2.0 ppm/°C typical (-55°C to $+125^{\circ}\text{C}$, $+25^{\circ}\text{C}$ ref.)
- Tolerance: to $\pm 0.01\%$
- Power rating: to 300 mW at $+70^{\circ}\text{C}$
- Load life stability: to $\pm 0.01\%$ at 70°C , 2000 h at rated power
- Resistance range: 5 Ω to 120 k Ω
- VFR resistors are not restricted to standard values; specific “as required” values can be supplied (e.g., 1K2345 vs. 1K)
- Thermal stabilization time < 1 s
- Maximum working voltage: 300 V

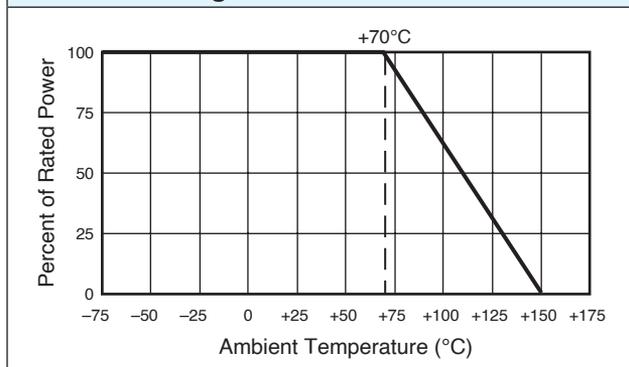


Pb-free Available
RoHS*
 COMPLIANT

Tolerance and TCR vs. Resistance Value (-55°C to $+125^{\circ}\text{C}$, $+25^{\circ}\text{C}$ Ref.)

RESISTOR	RESISTANCE VALUE (Ω)	TYPICAL TCR AND MAX. SPREAD (ppm/°C)	TOLERANCE (%)
VSH2 VSC2	60K to 120K	$\pm 2 \pm 4.5$	$\pm 0.01\%$
VSH1 VSC1	80 to $< 60\text{K}$	$\pm 2 \pm 4.5$	$\pm 0.01\%$
VSH1 VSC1	50 to < 80	$\pm 2 \pm 5.5$	$\pm 0.02\%$
VSH1 VSC1	5 to < 50	$\pm 2 \pm 6.5$	$\pm 0.05\%$

Power Derating Curve



Performance Specifications			
TEST	CONDITIONS	ΔR (%) – TYPICAL	ΔR (%) – MAXIMUM
Moisture Resistance	MIL-STD-202, method 106	±0.005	±0.03
Pressure Cooker Test	2 atmospheres absolute pressure, 121°C, 100% R.H. for 100 h	±0.2	±0.4
Short Time Overload	6.25 × P _{nom} , 5 s	±0.005	±0.05
Resistance to Solder Heat	+260°C, 20 s	±0.01	±0.03
Terminal Strength	2 lbs, 10 s	±0.0025	±0.03
Insulation Resistance	100 VDC, 2 min	>10 000M	>10 000M
Dielectric Withstanding Voltage	300 VAC, 1 min	±0.0025	±0.03
Thermal Shock	-65°C to +150°C, 5 cycles	±0.01	±0.02
Shock	MIL-STD-202, method 213, condition I	±0.005	±0.03
Vibration	MIL-STD-202, method 204, condition D	±0.01	±0.03
Load Life Stability	0.3 W, +70°C, 2000 h	±0.01	±0.015
Thermal EMF	-	0.07 μV/°C	0.1 μV/°C
Current Noise	Quan-Tech	-42 dB	-32 dB
Low Temperature Storage	24 h at -65°C	±0.005	±0.01
Low Temperature Operation	45 min at -65°C	±0.005	±0.01
High Temperature Exposure	+150°C	±0.01	±0.03

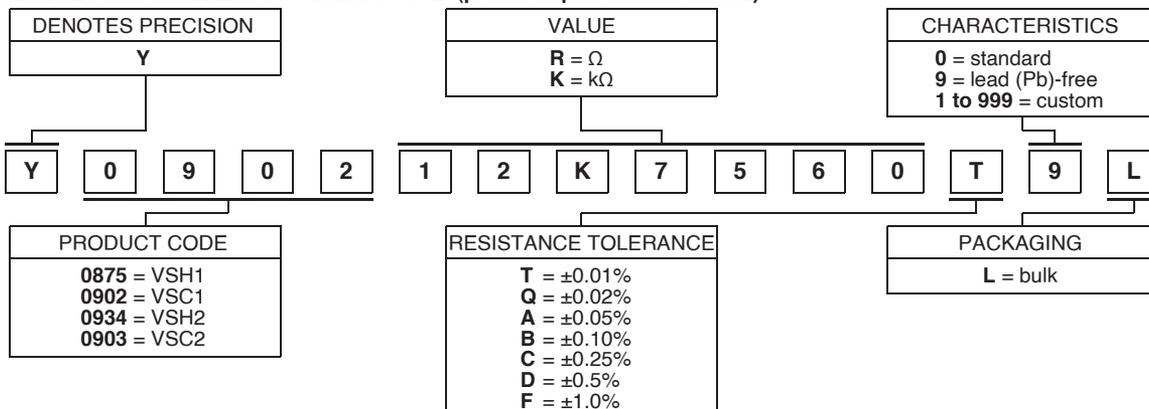
Standard Imprinting and Dimensions
in millimeters

	L	H	T	LS
VSH1	5.8±0.5 (0.228±0.02)	5.5±1 (0.216±0.04)	2.2±0.5 (0.086±0.02)	5.08±0.25 (0.200±0.01)
VSC1				3.81±0.25 (0.150±0.01)
VSH2	6.7±0.5 (0.263±0.02)	8±1 (0.315±0.04)	2.78±0.5 (0.110±0.02)	5.08±0.25 (0.200±0.01)
VSC2				3.81±0.25 (0.150±0.01)

Note
Letters H and C indicate a difference in lead spacing and -2 is an extension range

Global Part Number Information⁽¹⁾

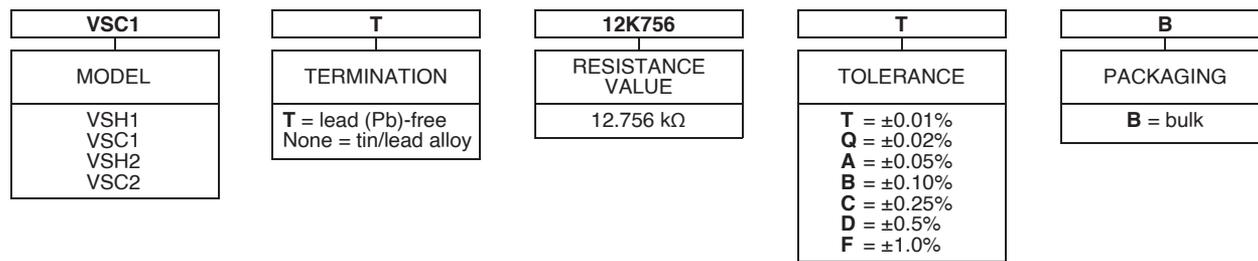
NEW GLOBAL PART NUMBER: Y090212K7560T9L (preferred part number format)



FOR EXAMPLE: ABOVE GLOBAL ORDER Y0902 12K7560 T 9 L:

TYPE: VSC1
 VALUES: 12.7560 kΩ
 ABSOLUTE TOLERANCE: 0.01%
 TERMINATION: lead (Pb)-free
 PACKAGING: bulk

HISTORICAL PART NUMBER: VSC1 T 12K756 T B (will continue to be used)



Note

⁽¹⁾ For non-standard requests, please contact application engineering.