HALOGEN

FREE

GREEN

(5-2008)





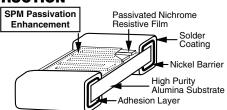
Commercial Thin Film Resistor, Surface Mount Chip



Actual Size 0505

For applications requiring low noise, stability, low temperature coefficient of resistance, and low voltage coefficient, all Vishay's proven precision thin film wraparound resistors will meet your exact requirements. Manufactured with the same material and processes as QPL and manufactured in a QPL facility.

CONSTRUCTION



FEATURES

- Moisture resistant (SPM) special passivation method
- Non-standard values available
- Pre-tinned terminations over nickel barrier (gold available)
- Very low noise and voltage coefficient (< -35 dB, 0.1 ppm/V)
- Non-inductive
- Laser-trimmed tolerances to 0.02 %
- In-lot tracking less than 5 ppm/°C
- Epoxy bondable termination available
- Sulfur resistant (per ASTM B809-95 humid vapor test)
- Flame resistant UL 94 V-0
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

TYPICAL PERFORMANCE

	ABSOLUTE	
TCR	25	
TOL.	0.1	

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Resistance Range	10 Ω to 6.19 MΩ	-
TCR: Absolute	± 10 ppm/°C to 100 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	± 0.02 % to ± 5 %	+25 °C
Stability: Absolute	ΔR ± 0.02 %	2000 h at 70 °C
Stability: Ratio	ī	-
Voltage Coefficient	0.1 ppm/V (typical)	-
Working Voltage	75 V to 200 V	-
Operating Temperature Range	-55 °C to +155 °C	-
Storage Temperature Range	-55 °C to +155 °C	-
Noise	< -35 dB (typical)	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01 \%$	1 year at +25 °C

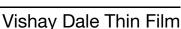
COMPONENT RATINGS						
CASE SIZE (1)	POWER RATING	WORKING VOLTAGE (V)	RESISTANCE RANGE (Ω)			
	(mW)		≥ 0.1 %	< 0.1 %		
0402	50	75	24.9 to 100K	250 to 100K		
0502	100	75	20 to 150K	250 to 150K		
0505	150	75	20 to 301K	250 to 301K		
0603	150	75	10 to 261K	250 to 261K		
0705	250	100	10 to 475K	250 to 475K		
0805	250	100	10 to 475K	250 to 475K		
1005	250	100	10 to 649K	250 to 649K		
1010	500	150	50 to 1M	250 to 1M		
1206	400	200	10 to 1.5M ⁽²⁾	250 to 1M		
1505	400	150	10 to 1M	250 to 1M		
2208	800	150	10 to 3.16M ⁽²⁾	250 to 1M		
2010	800	200	10 to 4.02M ⁽²⁾	250 to 1M		
2512	1000	200	10 to 6.19M ⁽²⁾	250 to 1M		

Notes

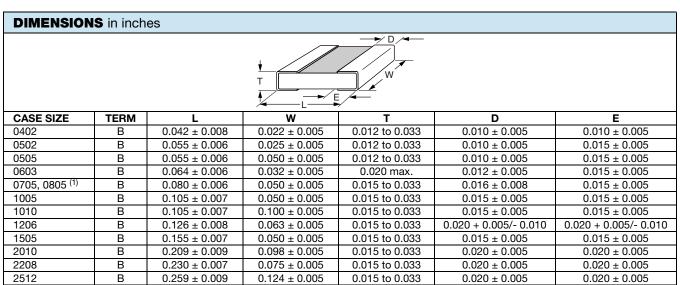
(1) 0705 and 0805 are the same (only use 0805 when ordering)

(2) Values > 1M best TCR ± 25 ppm/°C

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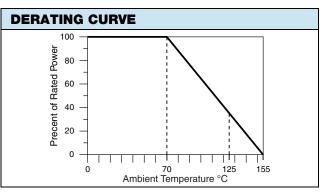


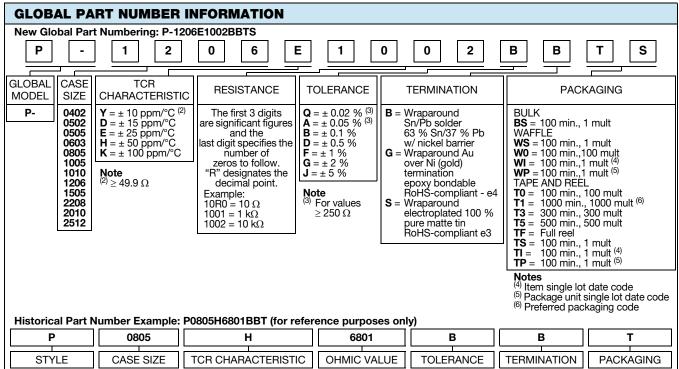


Note

^{(1) 0705} and 0805 are the same (only use 0805 when ordering).

ENVIRONMENTAL TESTS					
ENVIRONMENTAL TEST	10 kΩ ΔR ± (%)	100 kΩ ΔR ± (%)			
Thermal Shock	0.02	0.02			
Short Time Overload	0.01	0.01			
Low Temperature Operation	0.01	0.01			
Resistance to Solder Heat	0.04	0.03			
Moisture Resistance	0.02	0.01			
High Temperature Exposure	0.03	0.06			
Load Life (10 000 h, + 70 °C)	0.05	0.05			
TCR	± 25 ppm/°C	± 25 ppm/°C			







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