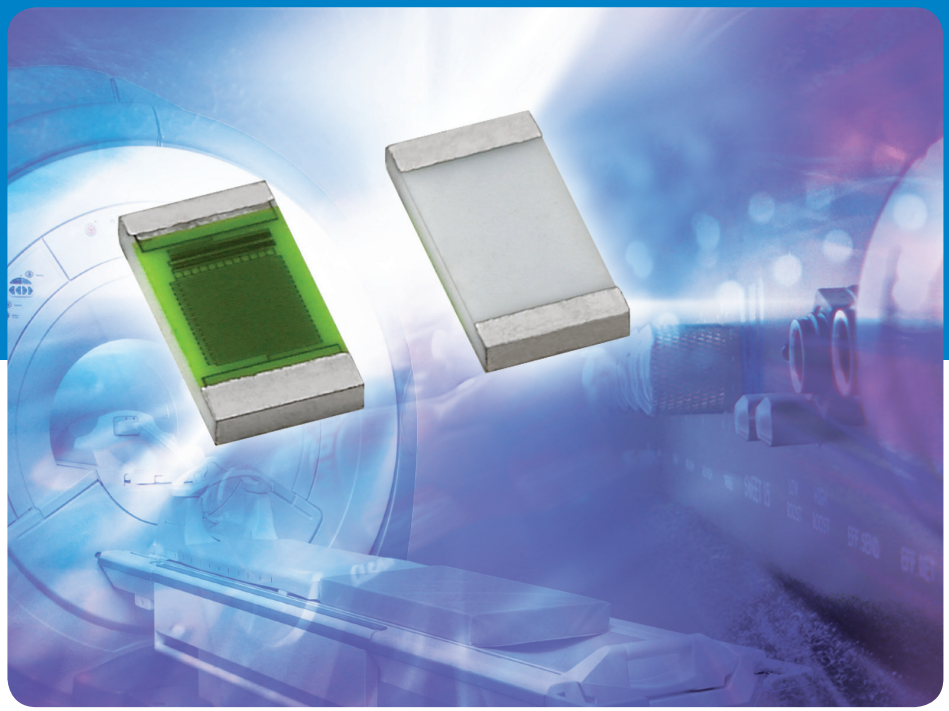
THIN FILM RESISTORS

PNM Series



Precision Non-Magnetic Thin Film Chip Resistors

KEY BENEFITS

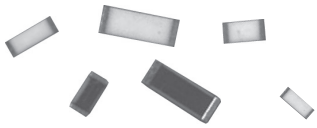
- Resistance range of 10 Ω to 3 MΩ
- TCR of ± 25 ppm/°C
- Tolerance to ± 0.1 %
- Stable film and performance characteristics: 2000 ppm at 70 °C, 10 000 h
- Non-standard resistance values available
- Lead (Pb)-free terminations available
- Very low noise and voltage coefficient: < - 30 dB, 0.1 ppm/V
- UL 94 V-0 flame resistant
- Compliant to RoHS directive 2002/95/EC

APPLICATIONS

- Medical imaging
- High-end audio equipment
- Measurement sensing

Datasheet is available on our web site at www.vishay.com
for PNM Series - http://www.vishay.com/doc?60057

Precision Thin Film Non-Magnetic Chip Resistors ± 25 ppm/°C, Tolerances to 0.1 %



Actual Size
1505

These devices eliminate materials that would disturb magnetic fields applications such as in MRI magnetic resonance imaging machines. The PNM series chip resistor has been carefully engineered with non-magnetic materials to eliminate the effects of these stray magnetic fields on circuit performance, thereby resulting in simplified shielding requirements and improved sound quality in audio applications. Providing signal conditioning without distortion from magnetic fields.

FEATURES

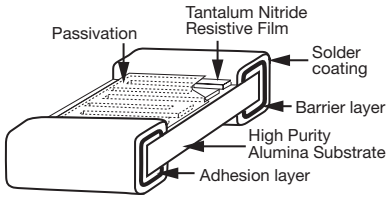
- Non-magnetic
- Moisture resistant
- High purity alumina substrate
- Non-standard values available
- Will pass + 85 °C, 85 % relative humidity and 10 % rated power
- 100 % visual inspected per MIL-PRF-55342
- Very low noise and voltage coefficient (< - 30 dB)
- Non-inductive
- Laser-trimmed tolerances to ± 0.1 %
- Wraparound resistance less than 10 mΩ
- Halogen-free according to IEC 61249-2-21 definition
- Compiant to RoHS directive 2002/95/EC

Pb-free Available

RoHS* COMPLIANT

HALOGEN FREE Available

CONSTRUCTION



TYPICAL PERFORMANCE

	ABSOLUTE
TCR	25
TOL.	0.1

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Tantalum nitride	-
Resistance Range	10 Ω to 3 MΩ	-
TCR: Absolute	± 25 ppm/°C to ± 100 ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	± 0.1 % to ± 1.0 %	+ 25 °C
Stability: Absolute	ΔR ± 0.03 %	-
Stability: Ratio	-	-
Voltage Coefficient	0.1 ppm/V	-
Working Voltage	75 V to 200 V	-
Operating Temperature Range	- 55 °C to + 125 °C	-
Storage Temperature Range	- 55 °C to + 150 °C	-
Noise	< - 30 dB	-
Shelf Life Stability: Absolute	-	-

GLOBAL PART NUMBER INFORMATION

P	N	M	1	2	0	6	E	1	0	0	2	B	B	T	1

GLOBAL MODEL

PNM Non-magnetic resistor

CASE SIZE

0402
0502
0505
0603
0805
1005
1010
1206
1505
2208
2010
2512

TCR CHARACTERISTIC

E = ± 25 ppm/°C
H = ± 50 ppm/°C
K = ± 100 ppm/°C

< 50 Ω

± 100 ppm/°C best

RESISTANCE

The first 3 digits are significant figures and the last digit specifies the number of zeros to follow. "R" designates the decimal point.

Example:
10R0 = 10 Ω
1000 = 100 Ω
1001 = 1 kΩ

TOLERANCE

B = ± 0.1 %
D = ± 0.5 %
F = ± 1 %
G = ± 2 %
J = ± 5 %

TERMINATION

B = Wraparound Sn/Pb solder 63 % Sn/ 37 % Pb
S = Wraparound lead (Pb)-free solder 96.5 % Sn/3.0 % Ag/ 0.5 % Cu RoHS compliant - e1

PACKAGING

BS = BULK 100 min., 1 mult
WS = WAFFLE 100 min., 1 mult

TAPE AND REEL
T0 = 100 min., 100 mult
T1 = 1000 min., 1000 mult (1)
T3 = 300 min., 300 mult
T5 = 500 min., 500 mult
TF = Full reel
TS = 100 min., 1 mult

Revision 23-Dec-09

Note

(1) Preferred packaging code