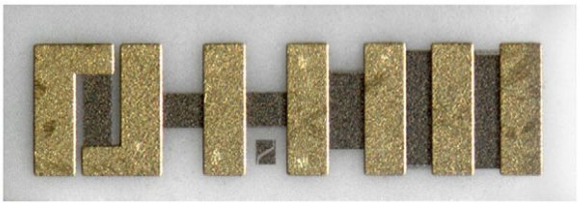
Thin Film Tapped Microwave Resistor



Product may not be to scale

The TMR resistor chips on alumina are designed with multiple low ohm taps for circuit trimming. The resistor geometries are compatible with strip lines, making them ideally suited for microwave circuits.

These chips are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The TMRs are 100 % electrically tested and visually inspected to MIL-STD-883, method 2032 class H or K.

FEATURES

- Wire bondable
- High frequency
- Six resistors on a single chip: size 0.020" x 0.060"
- Case: 0206
- Resistance range RT: 100 Ω to 430 Ω
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: tantalum nitride self passivating
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

APPLICATIONS

Vishay EFI TMR chip resistors provide excellent high frequency response and are ideally suited for prototyping. Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters
- Limiters

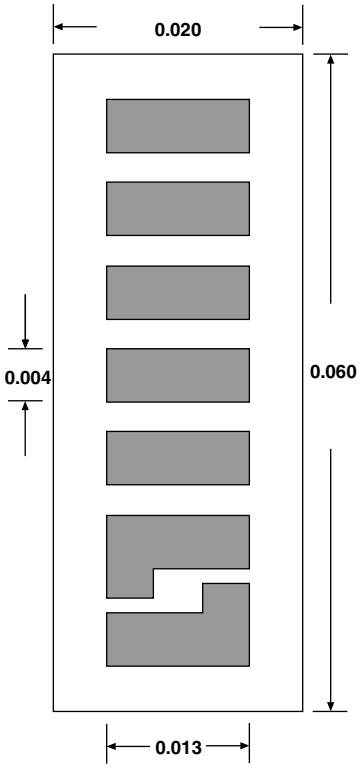
TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES		
PARAMETER	**VALUE**	**UNIT**
Resistance Range RT	100 to 430	Ω
Tolerances	± 10, of total value	%
TCR	± 100	ppm/°C

STANDARD ELECTRICAL SPECIFICATIONS		
PARAMETER	**VALUE**	**UNIT**
Noise, MIL-STD-202, Method 308	- 20 typ.	dB
Moisture Resistance, MIL-STD-202, Method 106	± 0.5 max. $\Delta R/R$	%
Stability, 1000 h, + 125 °C, 62 mW	± 1.0 max. $\Delta R/R$	%
Operating Temperature Range	- 55 to + 125	°C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 max. $\Delta R/R$	%
High Temperature Exposure + 150 °C, 1000 h	± 0.5 max. $\Delta R/R$	%
Dielectric Voltage Breakdown	200	V
Insulation Resistance	10^{12} min.	Ω
Operating Voltage	100 max.	V
DC Power Rating at + 70 °C (Derated to Zero at 150 °C)	0.125	W
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 max. $\Delta R/R$	%

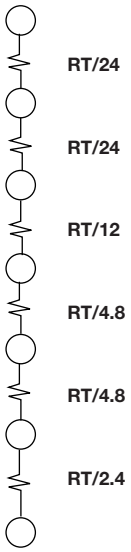
For technical questions, contact: efi@vishay.com

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DIMENSIONS in inches



SCHEMATIC



Note

- Example 240 Ω RT = 10 Ω, 10 Ω, 20 Ω, 50 Ω, 50 Ω, 100 Ω

MECHANICAL SPECIFICATIONS

PARAMETER	
Chip Size	0.020" x 0.060" ± 0.003" (1.5 mm x 0.5 mm ± 0.08 mm)
Chip Thickness	0.010" ± 0.002" (0.25 mm ± 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 µ" to 4 µ" finish
Resistor Material	Tantalum nitride, self-passivating
Bonding Pad Size	0.004" x 0.013" (0.10 mm x 0.33 mm)
Number of Pads	7
Pad Material	15 kÅ minimum gold
Backing	None

GLOBAL PART NUMBER INFORMATION

Global Part Number: TMR2400AKKNHWS

Global Part Number Description: TMR 240 10 %, 100 ppm/°C, none, class H, WS

T	M	R	2	4	0	0	A	K	K	N	H	W	S

MODEL	RESISTANCE RT	RESISTANCE MULTIPLIER CODE	TOL. CODE (%)	TCR (ppm/°C)	BACK METAL	VISUAL CLASS	PACKAGING CODE
TMR 20 x 60 size tapped microwave resistor TaN on alumina	First 4 digits are significant figures of resistance	**A** = 0.1	**F** = 1.0 **G** = 2.0 **J** = 5.0 **K** = 10 **M** = 20	**E** = ± 25 **C** = ± 50 **K** = ± 100 **L** = ± 200	**G** = Au **N** = none	**H** = class H **K** = class K	**WS** = waffle pack 100 min., 1 mult.

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