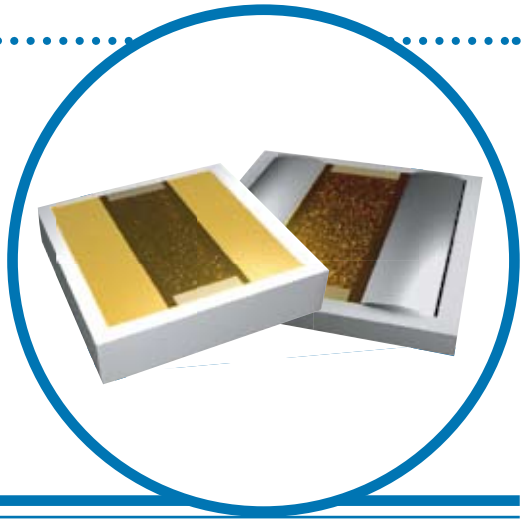
TaNFilm® Microwave Chip Resistor

OBSOLETE

MWR Series

- **Long life self passivating TaNFilm® element**
- **Low absolute TCR to ±25ppm/°C**
- **Performance characterized to 40GHz**
- **Wire-bonded, ribbon-bonded or solder mounted**
- **Flip chip mounting – keeps resistor element in the same plane as circuit**



The MWR series is specifically designed for transmission line termination at high frequencies. Characterized for high frequency performance to 40GHz, the MWR series provides superior terminator performance to generic “off-the-shelf” chip resistors.

Constructed with IRC’s proprietary TaNFilm® self passivating thin film resistive element, the MWR series chips possess the rugged environmental characteristics proven through decades of the most demanding military, space, telecommunications, computer, medical and networking applications.

Available with a choice of solderable or bondable termination finishes, the MWR series termination chips are suitable for solder attachment as well as chip and wire or ribbon attached hybrid circuits. Back side mounting is facilitated by an optional gold finish.

For demanding microwave/RF transmission line termination applications in harsh environments, select the IRC MWR series of high frequency termination chips.

Electrical Data

		MWC01
Power Rating	40°C	250mW
	70°C	125mW
Ohmic Value		50Ω, 75Ω, 100Ω
Available DC Tolerances		±10%, ±5%, ±2%, ±1%
Operating Temperature Range		-55°C to 100°C
Termination		60/40 Sn/Pb or Gold
Substrate		99.6% Alumina
Maximum Operating Voltage (not to exceed $\sqrt{P \times R}$)		50V
Stray Distributed Capacitance		<0.05pF

Environmental Data

Test Per MIL-PRF-55342	Performance	
	Typical	Max
Thermal Shock	±0.02%	±0.10%
Low Temperature Operation	±0.01%	±0.05%
Short-time Overload	±0.01%	±0.05%
High Temperature Exposure	±0.03%	±0.10%
Effects of Solder	±0.01%	±0.10%
Moisture Resistance	±0.03%	±0.10%
Life	±0.03%	±0.10%

General Note

TT electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT electronics’ own data and is considered accurate at time of going to print.

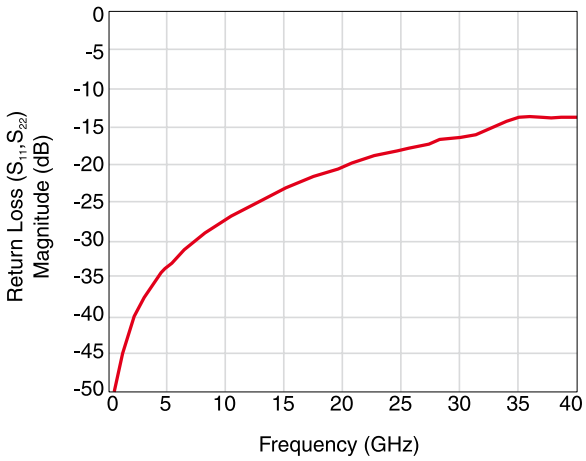
© TT electronics plc

TaNFilm® Microwave
Chip Resistor

MWR Series

OBSOLETE

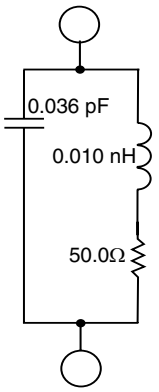
Frequency Performance Data



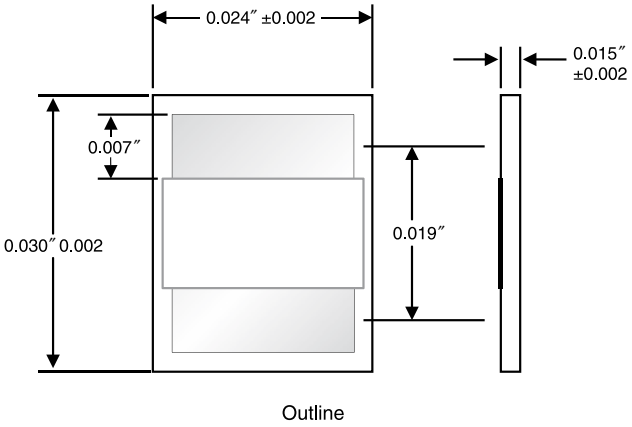
VSWR Data

Frequency	VSWR
1 GHz	<1.02
5 GHz	<1.05
10 GHz	<1.10
20 GHz	<1.20
30 GHz	<1.50
40 GHz	<1.60

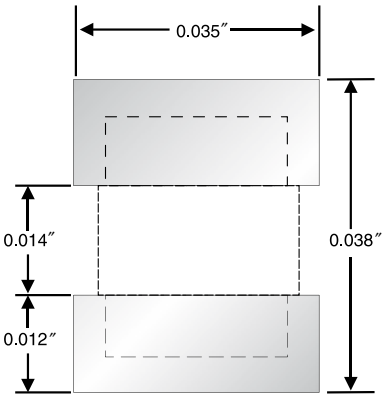
Model



Physical Data

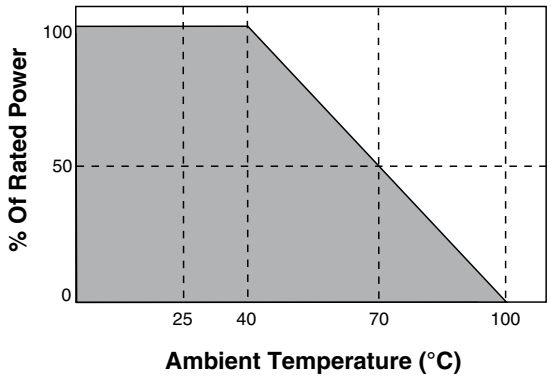


Outline



Land Pattern

Power Derating Curve



Ordering Data

Prefix MWR - MWC01 S C - 01 - 50R0 - F

Model
MWC01

Topside Termination
S = 60/40 Sn/Pb solder; G = Gold

Backside
C = Bare ceramic; G = Gold

TCR Code
01 = ±100ppm/°C; 02 = ±50ppm/°C; 03 = ±25ppm/°C

Resistance Code
50R0 = 50Ω; 75R0 = 75Ω 1000 = 100Ω

Tolerance Code
K = ±10%; J = ±5%; G = ±2%; F = ±1%

Packaging
Parts are packaged in 2" x 2" waffle packs in 400 piece quantities.

General Note
TT electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT electronics' own data and is considered accurate at time of going to print.

www.bitechnologies.com www.irctt.com www.welwyn-tt.com

© TT electronics plc