

# Resistor Ordering System

## EXAMPLE

1   2   3   4   5   6   7   8  
MTR-2R2K-SR2-K-NA-G-1-T

### 1) is the three letter device type designation

<b>MTR</b>	Single Value through Chip Resistor (Resistance top to bottom)
<b>MIR</b>	Single Value Pad to Pad Chip Resistor (Resistance Top pad to Top pad)
<b>MCR</b>	Dual Value Center Tap Ratio Chip Resistor. (Res. #1 = Prime Value / Res. #2 = Ratio Value)
<b>MMR</b>	MultiTap Chip Resistor.
<b>XXX</b>	as needed.

### 2) is the resistance value in ohms

<b>2R2K</b>	2,200 Ohms
<b>200R</b>	200 Ohms
<b>20R</b>	20 Ohms
<b>2R2M</b>	2,200,000 Ohms
<b>20R2K</b>	20,200 Ohms
<b>200RK</b>	200,000 Ohms

please see pp 86-87 for details

### 3) is the chip substrate material and chip outline dimensions (case style) R1 thru R8

		case	
<b>S</b>	Silicon Body	R1	20 Tap Multi-tap
<b>C</b>	Ceramic (99.6% Alumina)	R2	Dual Value
<b>B</b>	Berilium Oxide	R3	Single Value
<b>Q</b>	Quartz	R3A*	Single Low Value
<b>N</b>	Aluminum Nitride	R4	Six Value Ladder
<b>SP</b>	Special Material	R5	12 Tap Multi Tap
		R6	Single Low Value
		R7	Single Value
		R8	

please consult factory for special substrate materials (SP)

\*R3A Outline for resistances < 250 Ohms

### 4) is the resistor value total % $\pm$ tolerance

### 5) is the 2nd resistor value total % $\pm$ tolerance (if applicable)

A) On Dual Value Ratio Resistors, (MCR), this is the res. ratio of the 2nd resistor (Ratio Res.) To value of the 1st resistor (Prime Res.).

B) On Multi Tap Resistors (MMR). This is the tolerance of each of the small value Resistor Taps. The large value Resistor Taps are called out on (4).

<b>A</b>	$\pm 0.5$ Ohm	<b>F</b>	$\pm 1\%$
<b>B</b>	$\pm 1.0$ Ohm	<b>G</b>	$\pm 2\%$
<b>C</b>	$\pm 2.5$ Ohm	<b>J</b>	$\pm 5\%$
<b>D</b>	$\pm .01\%$	<b>K</b>	$\pm 10\%$
<b>E</b>	$\pm .1\%$	<b>M</b>	$\pm 20\%$
<b>NA</b>	Not applicable		

### 6) Backing

<b>G</b>	Solderable Gold
<b>GS</b>	Gold Silicon eutectic attachment
<b>B</b>	Bare

### 7) The temperature coefficient (TCR) of the resistor, in PPM

<b>0</b>	$\pm 150$ PPM
<b>1</b>	$\pm 100$ PPM
<b>2</b>	$\pm 50$ PPM
<b>3</b>	$\pm 10$ PPM

### 8) Resistor Material

<b>T</b>	Tantalum Nitride TaN (Self-Passivating)
<b>N</b>	NiChrome NiCr

#### Example: MicroMetrics part no.

MTR-200RK-SR3-F-NA-G-0-T

This would be a silicon body .020"x .020" x .010" single value through chip resistor with a total resistance tolerance of  $\pm 1\%$ , a Solderable gold back, and Tantalum Nitride as the resistor layer and a TCR of  $\pm 150$ PPM.

#### Example: MicroMetrics part no.

MCR-10RK-SR2-F-E-B-1-T

This would be a silicon body .030"x .030" x .010" two value ratio resistor with the first value resistance tolerance of  $\pm 1\%$  and the second, ratio resistor, tolerance being  $\pm 1\%$  of the first value. Resistance would be the total value of the two resistor. A Bare lapped silicon back, and Tantalum Nitride as the resistor layer and a TCR of  $\pm 100$ PPM.

#### Example: MicroMetrics part no.

MIR-2R5K-SR3-J-NA-B-2-N

This would be a silicon body .020"x .020" x .010" single value Top pad to Top pad chip resistor with a total resistance tolerance of  $\pm 5\%$ , a bare silicon back, with NiChrome as the resistor layer and a TCR of  $\pm 50$ PPM.

#### Example: MicroMetrics part no.

MMR-11RK-SR1-F-K-G-1-T

This would be a silicon substrates device .038" x .038" x .010". It would have a total resistance of 11KOhms  $\pm 1\%$ . It would have ten large tops of 1KOhm  $\pm 1\%$  each and ten small tops of 100Ohms  $\pm 10\%$  each. It would have a solderable gold back with a TCR of  $\pm 100$ ppm and a Tantalum Nitride resistive layer.

