

## 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

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

### 2) Is the resistance value in ohms

2R2K	2,200 Ohms
200R	200 Ohms
20R	20 Ohms
2R2M	2,200,000 Ohms
20R2K	20,200 Ohms
200RK	200,000 Ohms
2R	2.0 Ohms

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

S	Silicon Body	R1	20 Tap Multi Tap	.038"X.038" SR1
C	Ceramic (99.6% Alumina)	R2	Dual Value	.030"X.030" CR2
B	Berilium Oxide	R3	Single Value	.020"X.020" BR3
Q	Quartz	R3A*	Single Low Value	.020"X.020" QR3A
N	Aluminum Nitride	R4	Six Value Ladder	.020"X.060" NR4
SP	Special Material	R5	12 Tap Multi Tap	.030"X.030" SPR5
		R6	Single Low Value	.030"X.030" XR6
		R7	Single Value	.020"X.040" XR7
		R8		XR8

Please consult factory for special substrate materials (SP)  
\*R3A outline for resistances < 250 Ohms

### 4) Is the resistor value total % + tolerance See chart below

### 5) Is the 2nd resistor value total % ±tolerance (if applicable)

A	+ 0.5 Ohm	F	+ 1%
B	+ 1.0 Ohm	G	+ 2%
C	+ 2.5 Ohm	J	+ 5%
D	+ .01%	K	+ 10%
E	+ .1%	M	+ 20%
NA	Notapplicable		

A) On Dual Value 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)

### 6) Backing

G	Solderable Gold
GS	Gold Silicon eutectic attachment
B	Bare

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

0	+ 150 PPM
1	+ 100 PPM
2	+ 50 PPM
3	+ 10 PPM

### 8) Resistor Material

T	Tantalum Nitride TaN (Self Passivating)
N	NiChrome NiCr

Example: 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 + 1%, a Solderable gold back, and Tantalum Nitride as the resistor layer and a TCR of + 150PPM.

Example: 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 + 1%, and the second, ratio resistor, tolerance being + .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 + 100PPM.

Example: 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 + 5%, a bare silicon back, with NiChrome as the resistor layer and a TCR of + 50PPM.

Example: part no. MMR-11RK-SR1-F-K-G-1-T

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