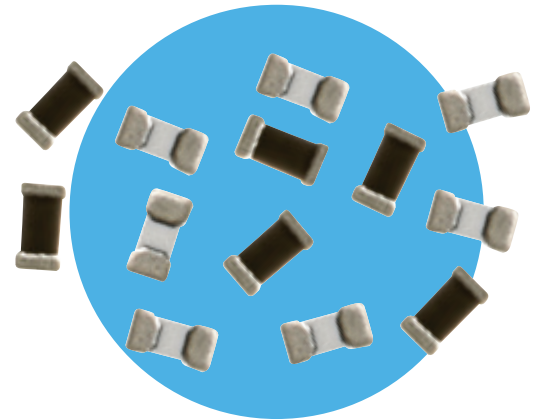


Metal Foil on Ceramic Chip Resistors



MFC Series

- Small size 0603
- Resistance range 5 to 20mΩ
- Current sensing for power electronics
- High power density

All parts are Pb-free and comply with EU Directive 2011/65/EU (RoHS2)

Electrical Data

		0603
Power rating @70°C	W	0.5
Resistance range	mΩ	5 to 20
Standard values	mΩ	5, 7, 9, 10, 20
Tolerance	%	± 1, 5
TCR (+25°C to +125°C)	ppm/°C	± 50
Operating temperature	°C	-55 to +155

Physical Data

Dimensions in mm and nominal weight in mg					
	L	W	A	T	Wt. nom
0603	1.6±0.2	0.8±0.2	0.4±0.2	0.6±0.2	3.3

Wrap-around terminations
(3 faces)

Construction

Metal foil resistor material, is bonded onto a 96% alumina substrate and protected. Wrap-around terminations have an electroplated nickel barrier and solder coating.

Marking

Components are not marked. Reels are marked with type, value, tolerance, date code and quantity.

Solvent Resistance

The body protection is resistant to all normal industrial cleaning solvents suitable for printed circuits.

Recommended Pad Dimensions

All dimensions in mm				
Size	Resistance mΩ	A	L	B
0603	5 & 20	1.0	2.8	0.6
	Others			0.85

For dissipation at rated power, copper trace thickness is 0.11mm

General Note

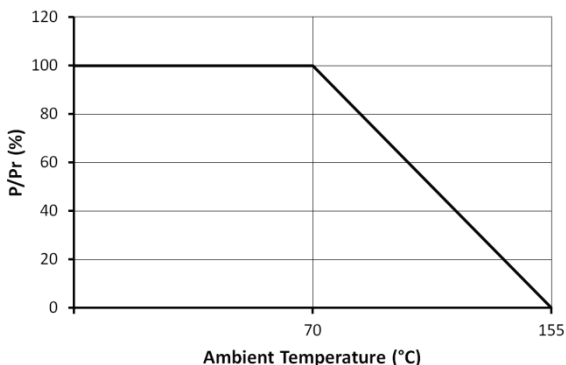
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

MFC Series

Performance Data

Parameter		Maximum
Load at rated power: 1000 hours at 70°C, cyclic load	±ΔR%	1
Overload: 5 x rated power for 5 seconds	±ΔR%	1
Moisture: No load, 1000 hours 85°C, 85% RH	±ΔR%	1
Temperature rapid change: 100 cycles, -55°C & 155°C	±ΔR%	1
High temperature exposure: 1000 hours at 155°C	±ΔR%	1
Low temperature exposure: 1000 hours at -55°C	±ΔR%	1
Bend strength: 2mm deflection	±ΔR%	0.5
Resistance to solder heat: 260±5°C for 10s	±ΔR%	0.5
Solderability: 245±5°C for 2s		≥95% coverage
Insulation resistance: 100V DC for 1min	ohms	>100M

Derating Curve



Packaging

0603 size resistors are supplied on 8mm paper carrier tape, all on 7 inch reels as per IEC 286-3. The 0603 size has 5000 chips per reel.

Ordering Procedure

Example: **MFC0603-R005FT5** (MFC0603, 5 milliohms ±1%, Pb-free)



1	2	3	4	5		
Series	Size	Value	Tolerance	Packing		
MFC	0603	3/4 characters R = ohms	F = ±1% J = ±5%	T5	0603	5000/reel

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.