

High Pulse Carbon Film
MELF Resistors

WCM Series

- 1.2/50µs surge up to 10kV
- Peak power up to 800W for 1ms
- 5s overload up to 700V
- Rated power up to 1W



All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

		WCM0204	WCM0207	WCM0207HP
Power rating at 70°C	watts	0.25	0.5	1.0
Resistance range	ohms	7R5 to 10M		
Limiting element voltage	volts	200	300	350
Maximum 5s overload voltage	volts	400	600	700
TCR	ppm/°C	≤100K: +0/-350, >100K-500K: +0/-700, >500K-1M0: +0/-1000, >1M0: +0/-1500		
Resistance tolerance	%	±2, ±5		
Standard values		E24		
Ambient temperature range	°C	-55 to +155		

Physical Data

Dimensions (mm) and weight (mg)						
Type	L max	D max	D1 max	K min	Weight	
WCM0204	3.7	1.55	1.5	0.5	20	
WCM0207	6.1	2.4	2.3	0.5	80	
WCM0207HP				1.0		

Construction

A carbon film is deposited onto a high dissipation ceramic former to which tin plated terminating caps are fitted. The resistor is adjusted to value by a helical cut in the film and the body is protected by a lacquer coating.

Marking

Resistance values are colour coded with three or four bands, indicating value and multiplier.

Terminations

Material Plated steel cap.

Solderability The pure tin finish produces ageing free contacts on which low melting solders can be used. Dipped area shall be covered with a smooth and bright solder coating after 3 seconds immersion at 215°C.

Solvent Resistance

The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuit boards.

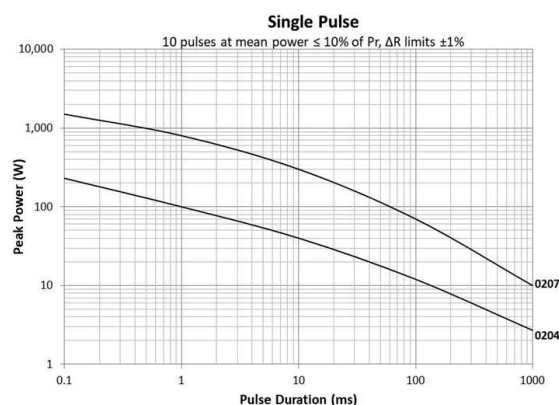
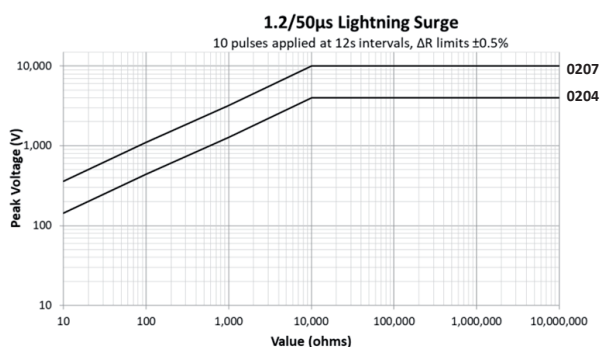
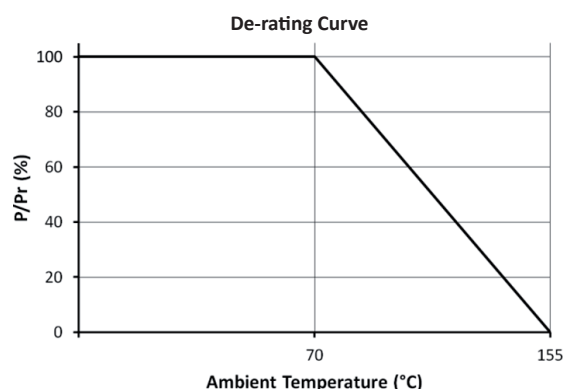
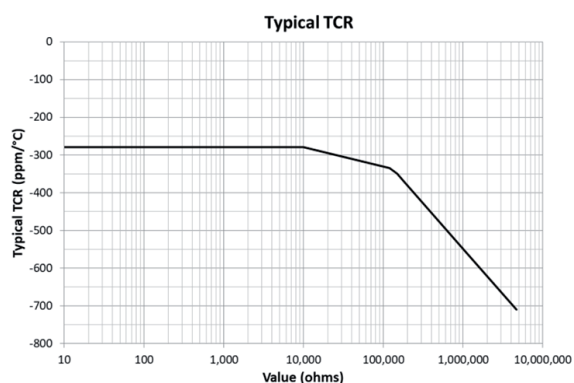
General Note

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.

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Performance Data

	$\pm\Delta R$
Short time overload: 5s at lesser of 6.25 x rated power or 2 x LEV	0.5% + 0.1 Ω
Climatic sequence: BS EN 60115-1:2011+A11 2015, Method 4.23	0.5% + 0.1 Ω
Bending test: 2mm deflection for 60s	0.25% + 0.1 Ω
Resistance to soldering heat: 260 \pm 5°C for 10 \pm 1 sec	1% + 0.05 Ω
Temperature rapid change: 1000cycles-55/125°C	1.5% + 0.1 Ω
Endurance (cyclic load): 1000hrs rated power at 125°C	2% + 0.05 Ω
Endurance (constant load): 1000hrs rated power at 70°C	2% + 0.05 Ω
Vibration: 5g for 20min, 12 cycles each of 3 orientations, 10-2000Hz	0.5% + 0.1 Ω
ESD: 2kV human body model	0.5% + 0.05 Ω
Solderability: 235 \pm 5°C for 3 \pm 0.5sec	>95% coverage
Voltage proof: 1.42 x LEV	No flashover or breakdowns



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Ordering Procedure

Example: WCM0207HP-2K49GT2 (WCM0207HP, 2.49 kilohms ±2%, Pb-free)

W	C	M	0	2	0	7	H	P	-	2	K	4	9	G	T	2
1			2			3		4				5	6			

1	2	3	4	5	6		
Series	Size	Variant	Value	Tolerance	Packing		
WCM	0204	Omit for standard	3/4 characters R = ohms K = kilohms M = megohms	G = ±2	T3	0204	3000 / 7" reel
	0207	HP=High Power		J = ±5	T2	0207	2000 / 7" reel