

FEATURES

- High Voltage Ratings
- Smaller Package Sizes
- Low Cost
- Wraparound Terminals

SPECIFICATIONS

Preferred Number Series for Resistors:

- ±1%, 2%: E96, E24
- ±5%, 10%: E24

Material

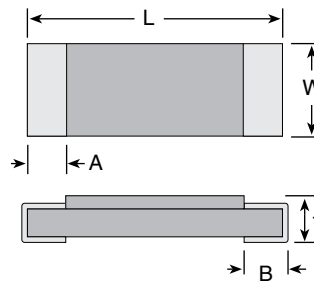
Substrate: Alumina
Resistor: Thick Film
Coating: glass overcoat
Terminal: 100% nickel barrier inner layer with 100% matte tin outer layer

Electrical

Tolerance: 1-10%
Derating: Linearly from 100% at 70°C to 0% at 125°C
Isolation Voltage: 500V (ex. MMC06: 100V)
Oper. Temp. Range: -55°~+125°

Mini Macro Chip Series

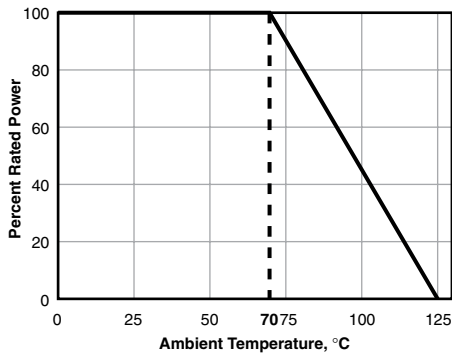
High Voltage Thick Film SMD Chip



Series (Size in./met.)	Resistance Range	TCR 10 ⁻⁶ /°C	Power Rating (W) @70°C	Voltage Rating*	Isolation Voltage	Dimensions (in./mm)					Qty./Reel
						L	W	t	A	B	
MMC06 (0603/1608)	470Ω~10MΩ	±100	0.1	200	100	0.063 ±.004	0.031 ±.006	0.018 ±.004	0.012 ±.004	0.012 ±.004	5000
	47Ω~464Ω	±200				1.6 ±0.1	0.8 ±0.15	0.45 ±0.1	0.3 ±0.1	0.3 ±0.1	
MMC08 (0805/2012)	100Ω~10MΩ ±1% & ±2%	±100	0.125	300	500	0.079 ±.004	0.049 ±.004	0.022 ±.004	0.016 ±.008	0.016 ±.008	5000
	100Ω~51MΩ ±5% & ±10% 47Ω~97.6Ω	±200				2.0 ±0.1	1.25 ±0.10	0.55 ±0.1	0.4 ±0.2	0.4 ±0.2	
MMC12 (1206/3216)	100Ω~10MΩ ±1% & ±2%	±100	0.25	400	500	0.126 ±.004	0.063 ±.006	0.022 ±.004	0.020 ±.01	0.020 ±.01	5000
	100Ω~51MΩ ±5% & ±10% 47Ω~97.6Ω	±200				3.2 ±0.1	1.6 ±0.15	0.55 ±0.1	0.5 ±0.25	0.5 ±0.25	
MMC25 (2512/6332)	560Ω~20MΩ ±1% & ±2%	±100	1.0	800	500	0.248 ±.004	0.126 ±.006	0.022 ±.004	0.024 ±.008	0.024 ±.008	4000
	560Ω~51MΩ ±5% & ±10% 100Ω~549Ω 47Ω~97.6Ω	±200 ±500~-200				6.3 ±0.1	3.2 ±0.15	0.55 ±0.1	0.6 ±0.2	0.6 ±0.2	

*Use Ohm's Law ($V = \sqrt{P \cdot R}$) to calculate maximum working voltage.
 Note: Limiting Element Voltage can only be applied to resistors when the resistance is equal to or higher than the critical resistance value.

DERATING



ORDERING INFORMATION

RoHS Compliant

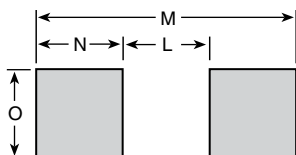
MMC12J4704ETP

Type	Wattage	Tolerance	Resistance	Packaging
06 = 0.1	F = 1%	First 3 digits are significant; 4th digit is multiplier (# of zeroes to follow).	TP = Paper tape (use on MMC06, MMC08, MMC12)	
08 = 0.125	G = 2%	Examples:	TR = Embossed tape (use on MMC25)	
12 = 0.25	J = 5%	4704 = 4,700,000		
25 = 1.0	K = 10%	1214 = 1,210,000		
		Use E96 values for 1%		
		Use E24 values for 5%		

Note: Units are marked with 3-digit (E24 Series) or 4-digit (E96 Series). 4-digit marking not available on MMC06 sizes.

LAND PATTERN (in.)

Land pattern dimensions are for reference only



Size	M	N	O	L
MMC06	0.075	0.024	0.041	0.027
MMC08	0.095	0.032	0.069	0.031
MMC12	0.146	0.040	0.080	0.066
MMC25	0.272	0.048	0.150	0.176