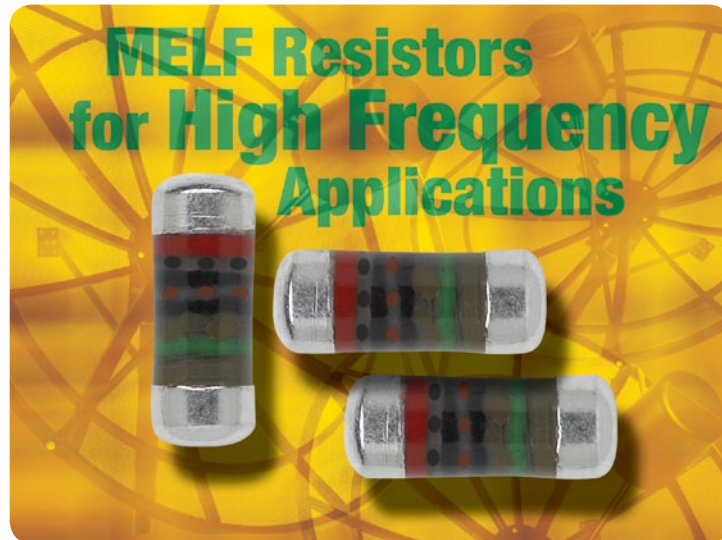


Pulse Load MELF Resistor for High Frequency Applications



Resistors - MELFs for RF Applications

KEY BENEFITS

- Speciality product for RF applications
- Low-inductance non-helical trimmed product
- Special carbon film technology
- ESD capability: 3 kV, human body model
- Suitable for more than 10 GHz
- Lead (Pb)-free and RoHS compliant

APPLICATIONS

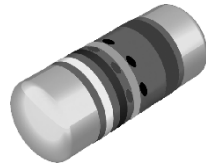
- Telecommunication equipment
- Industrial electronics

RESOURCES

- Datasheet: CMA 0204 HF - <http://www.vishay.com/doc?28759>
- For technical questions contact ff3bresistors@vishay.com



Pulse Load MELF Resistor for High Frequency Applications



CMA 0204 HF specialty MELF resistors combine the advanced pulse load capability and the suitability for RF applications in a single component. They are the perfect choice in high frequency circuit designs where the parasitic inductance of regular, helical trimmed resistors can not be accepted, but where also pulse energies apply. Typical applications are in the fields of telecommunication equipment and industrial electronics.

FEATURES

- Specialty product for RF applications
- Low-inductance non-helical trimmed product
- Special carbon film technology
- ESD capability: 3 kV, human body model
- Suitable for more than 10 GHz
- Compatible with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2011/65/EU



RoHS
COMPLIANT

APPLICATIONS

- Telecommunication equipment
- Industrial electronics

METRIC SIZE

DIN	0204
CECC	RC 3715M

TECHNICAL SPECIFICATION

DESCRIPTION	CMA 0204 HF		
CECC size	RC 3715M		
Resistance range	50 Ω; 47 Ω to 300 Ω		
Resistance tolerance	± 2 %		
Temperature coefficient	Approx. - 250 ppm/K		
Operation mode	Standard	Power	
Climatic category (LCT/UCT/days)	55/125/56	55/155/56	
Rated dissipation P_{70} ⁽¹⁾	0.25 W	0.4 W	
Operating voltage, U_{max} . AC/DC	Limited by P_{70}		
Film temperature	125 °C	155 °C	
Max. resistance change at P_{70} for resistance range, $\Delta R/R$ after:	47 Ω to 300 Ω		
	1000 h	≤ 1 %	≤ 2 %
	8000 h	≤ 2 %	≤ 4 %
	225 000 h	t.b.f.	-
Permissible voltage against ambient (insulation):	300 V		
	1 min; U_{ins}	75 V	
	Continuous		
Failure rate: FIT _{observed}	≤ 0.1 x 10 ⁻⁹ /h		

Revision 01-Dec-09

Notes

- These resistors do not feature a limited lifetime when operated within the permissible limits. However, resistance value drift increasing over operating time may result in exceeding a limit acceptable to the specific application, thereby establishing a functional lifetime.
- ⁽¹⁾ The power dissipation on the resistor generates a temperature rise against the local ambient, depending on the heatflow support of the printed-circuit board (thermal resistance). The rated dissipation applies only if the permitted film temperature is not exceeded. Furthermore, a high level of ambient temperature or of power dissipation may raise the temperature of the solder joint, hence special solder alloys or board materials may be required to maintain the reliability of the assembly.