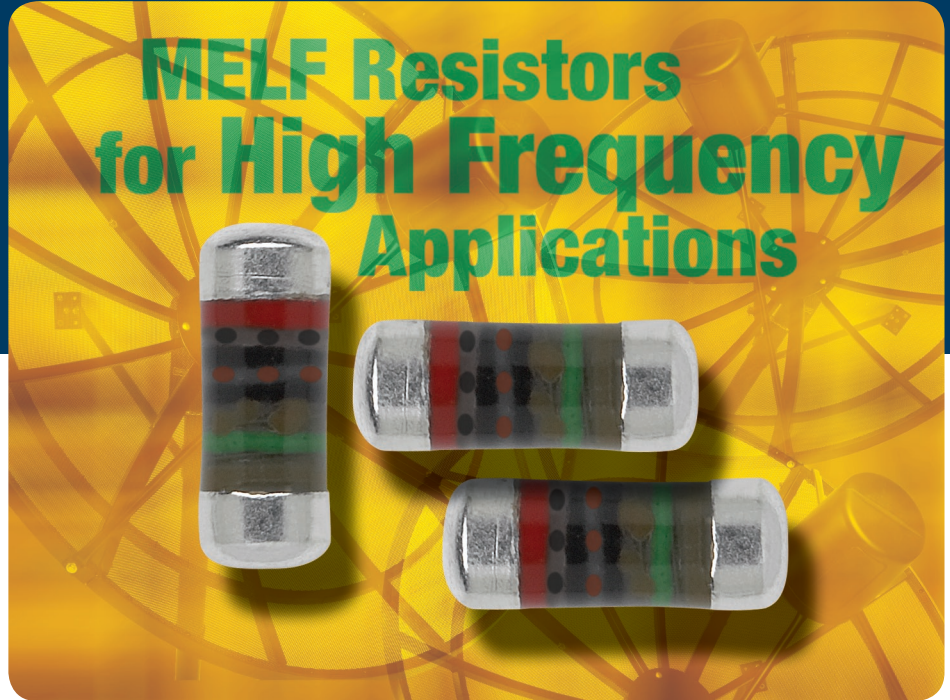




MELF RESISTOR

CMA 0204 HF

MELF Resistors for High Frequency Applications



Pulse Load MELF Resistor for High Frequency Applications

Vishay Beyschlag

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

Datasheet is available on our web site at www.vishay.com
for CMA 0204 HF - <http://www.vishay.com/doc?28759>

Pulse Load MELF Resistors for High Frequency Applications



FEATURES

- 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
- Compatible with lead (Pb)-free and lead containing soldering processes
- Lead (Pb)-free and RoHS compliant



CMA 0204 HF speciality 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.

APPLICATIONS

- Telecommunication equipment
- Industrial electronics

METRIC SIZE

DIN:	0204
CECC:	RC 3715M

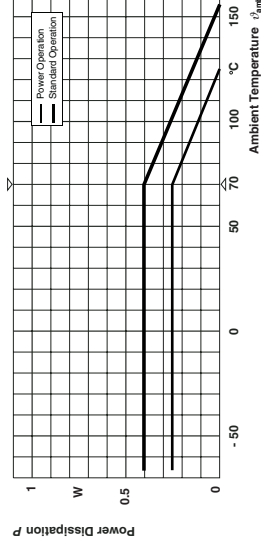
TECHNICAL SPECIFICATION

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
Rated dissipation $P_{70}^{1)}$	0.25 W
Operating voltage, U_{max} , AC/DC	Limited by P_{70}
Film temperature	125 °C
Max. resistance change at P_{70} for resistance range, $ ΔR/R $ after:	47 Ω to 300 Ω
	1000 h
	8000 h
	225 000 h
Permissible voltage against ambient (insulation):	
1 minute; U_{As}	300 V
continuous	75 V
Failure rate	$\leq 1 \times 10^{-9}$ /h

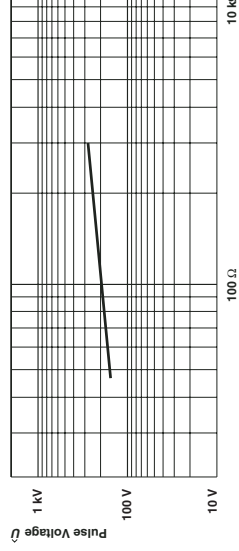
Note: These resistors do not feature a limited lifetime when operated within the permissible limits. However, resistance value drift increasing over operating time may result in exceeding a limit acceptable to the specific application, thereby establishing a functional lifetime.

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.

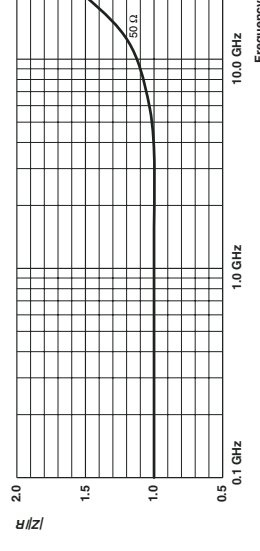
FUNCTIONAL PERFORMANCE



Derating - Standard Operation



1,2/50 Pulse
Pulse load rating in accordance with IEC 60115-1, 4.27; 1,2 μs/50 μs; 5 pulses at 12 s intervals; for permissible resistance change 0,5 %



RF - Behaviour

Revision 18-Jul-06

NOTICE Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies. Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.