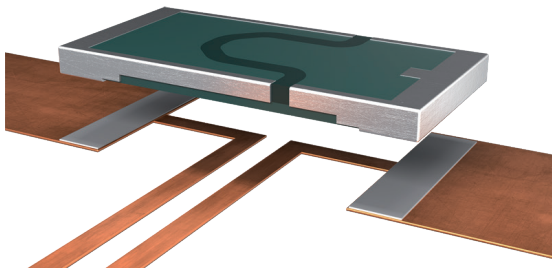




ISA-PLAN® // PRECISION RESISTORS



CMP // Size 2010



Features

- 2 W power rating at 70 °C
- Constant current up to 14 A (10 mOhm)
- High pulse power rating
- Good long-term stability
- Mounting: Reflow-, and IR-soldering
- AEC-Q200 qualified
- RoHS 2011/65/EU compliant



Applications

- Current sensor for power hybrid applications
- Control systems for the automotive market
- Power modules
- Frequency converters
- Switch mode power supplies
- Driver for LED light systems

Technical data

Resistance values	mOhm	10 to 500
Tolerance	%	1 / 5
Temperature coefficient (20-60 °C)	ppm/K	<50
Applicable temperature range	°C	-65 to +170
Power rating P_{70°C}	W	2
Power rating P_{120°C}	W	1
Internal heat resistance (R _{thi})	K/W	<50
Dielectric withstanding voltage	V AC/DC	200
Inductance	nH	<3
Stability (P_{120°C}) deviation after 2000h T _K = Terminal temperature		<1.0 % (T _K =120°C)

Ordering code

CMP - R010 - 1.0

- Tolerance
- Resistance value [Ohm] / "R" represents decimal point
- Type



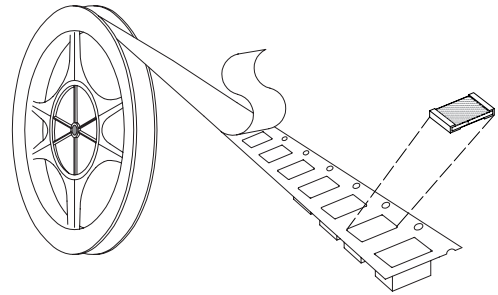
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Recommended solder profile

Reflow- and IR-soldering				
Temperature	°C	260	255	217
Time	sec	peak	40	90

Tape and reel information

Specification	DIN EN 60286-3			
Tape width	mm	12		
Reel size	inch	13		
Parts per reel	pcs	12500		
Packaging weight	g	481		



Available standard resistance values and tolerances

Resistance values	Tolerance	
	1.0	5.0
R010	✓	✓
R012*		
R015	✓	
R020	✓	
R022*		
R025*		
R027*		
R030*		
R033	✓	✓
R036*		
R039*		
R043*		
R047*		
R050	✓	✓
R056*		
R062*		
R068*		
R075*		
R082*		

Resistance values	Tolerance	
	1.0	5.0
R091*		
R100	✓	
R120*		
R130*		
R150	✓	
R160*		
R180*		
R200	✓	
R220*		
R240*		
R270*		
R300*		
R330*		
R360*		
R390*		
R430*		
R470*		
R500	✓	

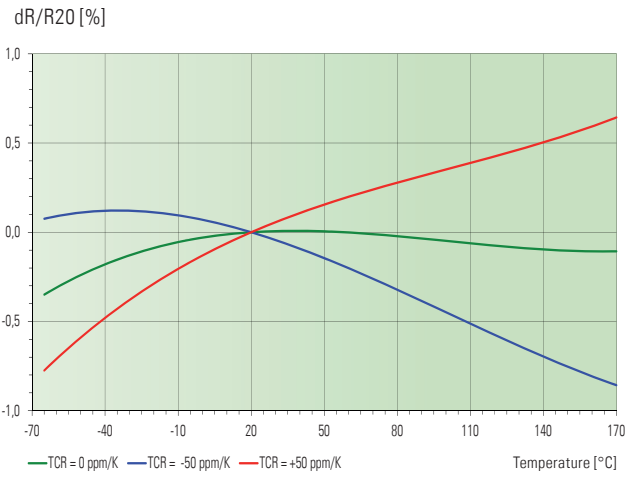
✓ = available

* Values and tolerances on request

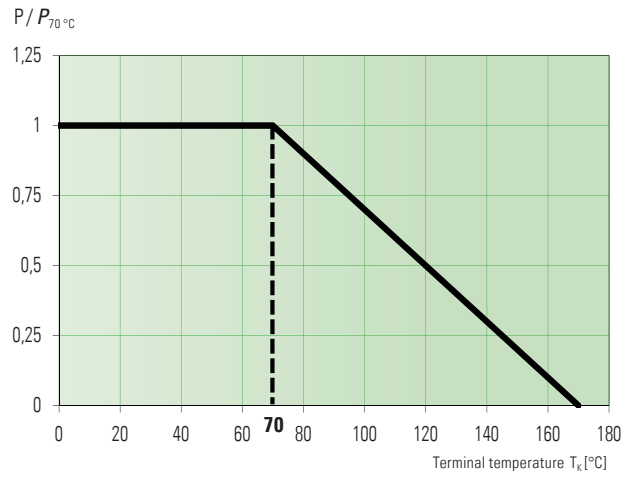


CMP // SIZE 2010

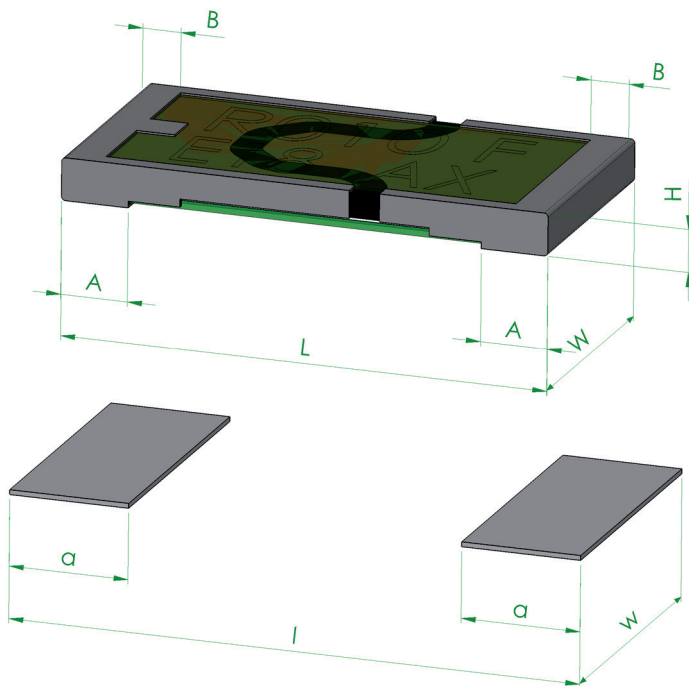
Temperature dependence of the electrical resistance of CMP resistors



Power derating curve



Mechanical dimensions [mm]



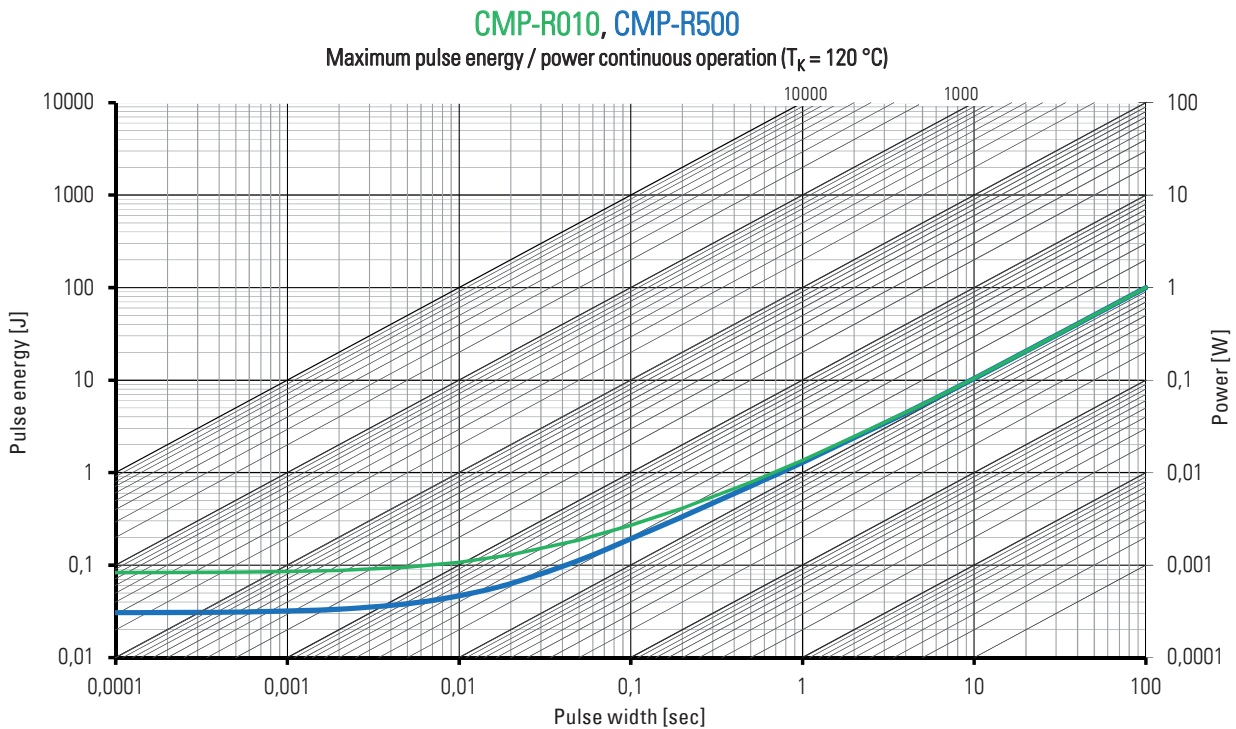
Type	L	W	H	A	B
CMP	5.08 ±0.2	2.54 ±0.2	0.4 ±0.15	0.7 ±0.2	0.4 ±0.15

Solder pad type	l	w	a
CMP	6.0	3.0	1.25



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Maximum pulse energy respectively pulse power for permanent operation 120 °C



Specification

Parameters	Test conditions	Specified values
Temperature Cycling	2000 cycles (-55 °C to +150 °C)	±0.5 %
Low Temperature Storage	-65 °C for 250 h	±0.1 %
Resistance to Soldering Heat	260 °C for 10 sec / 8h steam aging	±0.3 %
Moisture Resistance	MIL-STD-202 method 106	±0.3 %
Mechanical Shock	100 g, 6 ms half sine	±0.2 %
Vibration, High Frequency	10 g, 10-2000 Hz, 24 h each axis	±0.2 %
Operational Life	2000 h, T_K max at rated power	±1.0 %, $T_K = 120\text{ °C}$
High Temperature Exposure	2000 h / 170 °C	±1.0 %
Bias Humidity	+85 °C, 85 r.F., 1000 h, powered	±0.5 %

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