

< 3216(1206)size Comparative Specification >

**Difference**

Rev. M18R-01

Product	Rohm Product	OEM Product			
	MCR18 EZP series	MCR18 ERT series			
Country of Origin	Philippines	China			
Dimension Construction					
① Resistive Layer	Resistive element	Resistive element			
② Top Inner Electrode	Silver thick film electrode	Silver thick film electrode			
③ Side Electrode	Silver thick film electrode	<del>Nickel-Chrome electrode</del>			
④ Terminal Inner Electrode	Nickel plating	Nickel plating			
⑤ Substrate	Alumina	Alumina			
⑦ Protect Layer	Over coating (Resin)	Over coating (Resin)			
Marking					
Marking Method	J class (±5.0%): 3 digits marking F class (±1.0%): 4 digits marking First two or three digits are significant figure, and final digit is multiplier. The R is used as a decimal point.	J class (±5.0%): 3 digits marking F class (±1.0%): 4 digits marking First two or three digits are significant figure, and final digit is multiplier. The R is used as a decimal point.			
Marking Color	Yellowish white marking or other appropriate marking	Yellowish white marking or other appropriate marking			
Package					
Material	paper	paper			
Pitch	4mm	4mm			
Quantity	5,000 pcs	5,000 pcs			
Rating					
Rated Power	0.25 W at 70 °C	0.25 W at 70 °C			
Limiting Element Voltage	200 V	200 V			
Operating Temperature Range	-55°C / +155°C	-55°C / +155°C			
Resistance Tolerance					
F級 (±1.0%)	10Ω ≤ R.V. < 1 MΩ : ±100 (E24, E96) 1 MΩ ≤ R.V. ≤ 2.2 MΩ : ±100 (E24, E96)	10Ω ≤ R.V. < 1 MΩ : ±100 (E24, E96) 1 MΩ ≤ R.V. ≤ 2.2 MΩ : <del>±200</del> (E24, E96)			
J class (±5.0%)	1Ω ≤ R.V. < 10Ω : ±400 (E24) 10Ω ≤ R.V. ≤ 10 MΩ : ±200 (E24)	1Ω ≤ R.V. < 10Ω : ±400 (E24) 10Ω ≤ R.V. ≤ 10 MΩ : ±200 (E24)			
Jumper Type					
Resistance	max 50 mΩ	max 50 mΩ			
Rated Current	2 A	2 A			
Operating Temperature Range	-55°C / +155°C	-55°C / +155°C			
Characteristics, Reliability					
Item	Test Conditions	Resistor Type	Jumper Type	Resistor Type	Jumper Type
Variation of Resistance with Temperature	+25°C / +125°C	refer to Resistance Tolerance		refer to Resistance Tolerance	
Overload	Rated voltage (Current) x 2.5, 2s Limiting Element Voltage x 2 : 400V	±( 2.0 % + 0.1 Ω )	max. 50 mΩ	±( 2.0 % + 0.1 Ω )	max. 50 mΩ
Solderability	Soldering condition : 235±5°C Duration of immersion : 2.0±0.5s	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.		A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	
Resistance to Soldering Heat	Soldering condition : 260±5°C Duration of immersion : 10±1s	±( 1.0 % + 0.05 Ω )	max. 50 mΩ	±( 1.0 % + 0.05 Ω )	max. 50 mΩ
Rapid Change of Temperature	-55°C / +125°C 5 cycle	±( 1.0 % + 0.05 Ω )	max. 50 mΩ	±( 1.0 % + 0.05 Ω )	max. 50 mΩ
Damp Heat, Steady State	40°C, 93%RH 1,000~1,048h	±( 3.0 % + 0.1 Ω )	max. 100 mΩ	±( 3.0 % + 0.1 Ω )	max. 100 mΩ
Endurance at 70°C	Rated voltage(current) 70°C 1.5h-on/0.5h-off 1,000~1,048h	±( 3.0 % + 0.1 Ω )	max. 100 mΩ	±( 3.0 % + 0.1 Ω )	max. 100 mΩ
Endurance	155°C 1,000~1,048h	±( 3.0 % + 0.1 Ω )	max. 100 mΩ	±( 3.0 % + 0.1 Ω )	max. 100 mΩ
Resistance to Solvent	23±5°C, Immersion 5±0.5min Solvent: 2-propanol	±( 1.0 % + 0.05 Ω )	max. 50 mΩ	±( 1.0 % + 0.05 Ω )	max. 50 mΩ
Bond Strength of The End Face Plating	distance among support points:90mm amount of bend : 3mm	±( 1.0 % + 0.05 Ω )	max. 50 mΩ	±( 1.0 % + 0.05 Ω )	max. 50 mΩ
		Without mechanical damage such as breaks.		Without mechanical damage such as breaks.	

Design	Check	Approval	Date	SPECIFICATION No.
<i>T. Adachi</i>	<i>J. Takada</i>	<i>R. Kudo</i>	11 / Nov / 2011	ID - 1928
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