



MELF-MFR TYPE



Coating color: Blue.

塗裝色: 藍色

Dimensions:

Type	Size	Dimensions(mm)			
		L	D	C	S
MELF-MFR	0102	2.2+0/-0.1	1.1+0/-0.1	0.4±0.05	0.1±0.05
	0204	3.5±0.2	1.45±0.1	0.7±0.1	0.15±0.1
	0207	5.7±0.2	2.2±0.1	0.8±0.2	0.2±0.1
	0309	8.5±0.3	3±0.3	1.7±0.2	0.3±0.1
	0411	10.5±0.3	4±0.3	2.3±0.2	0.3±0.1
	0515	14.5±0.3	4.5±0.3	2.3±0.2	0.3±0.1

Range:

Type	Size	POWER RATING	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	T.C.R.	RESISTANCE RANGE				
						±0.1%	±0.25%	±0.5%	±1%	±5%
MELF-MFR	0102	1/8W 0.2W	150V	300V	±15ppm ±25ppm ±50ppm ±100ppm	50 _Ω - 56K	50 _Ω - 100K	1 _Ω - 1M	0 _Ω 22 - 2M	
		100 _Ω - 56K				100 _Ω - 100K	1 _Ω - 1M	0 _Ω 22 - 2M		
	0204	1/8W	200V	400V		100 _Ω - 56K	100 _Ω - 100K	1 _Ω - 1M	0 _Ω 5 - 2M	
		1/4W 0.4W				100 _Ω - 100K	10 _Ω - 560K	1 _Ω - 5M	0 _Ω 22 - 5M	
	0207	1/4W	300V	600V		100 _Ω - 100K	10 _Ω - 560K	1 _Ω - 5M	0 _Ω 22 - 5M	
		1/2W				100 _Ω - 100K	10 _Ω - 560K	1 _Ω - 5M	0 _Ω 5 - 5M	
		1W				100 _Ω - 100K	10 _Ω - 560K	1 _Ω - 5M	0 _Ω 5 - 5M	
	0309	1W	500V	1000V		-----	10 _Ω - 100K	1 _Ω - 1M	0.1 _Ω - 1M	
	0411	2W				-----	10 _Ω - 100K	1 _Ω - 1M	0.1 _Ω - 1M	
	0515	3W				-----	10 _Ω - 100K	1 _Ω - 1M	0.1 _Ω - 1M	
-----					10 _Ω - 100K	1 _Ω - 1M	0.1 _Ω - 1M			

額定電壓是以， $\sqrt{\text{功率(W)} \times \text{阻值}(\Omega)}$ 計算所得的值及以規格表中所列最高使用電壓兩者相較小者。

Rated-Voltage = $\sqrt{P(W) \times R(\Omega)}$ or Max.working voltage, whichever lower.

PATTERN STYLES FOR MELF RESISTORS



TYPE/SIZE	WAVE SOLDERING				REFLOW SOLDERING			
	G (mm)	Y (mm)	X (mm)	Z (mm)	G (mm)	Y (mm)	X (mm)	Z (mm)
MMU 0102	0.7	1.2	1.5	3.1	1.1	0.8	1.3	2.7
MMA 0204	1.5	1.5	1.8	4.5	1.7	1.2	1.6	4.1
MMB 0207	2.8	2.1	2.6	7.0	3.2	1.7	2.4	6.6

Notes

• The given solder pad dimensions reflect the considerations for board design and assembly as outlined e.g. in standards IEC 61188-5-x⁽¹⁾, or in publication IPC-7351

⁽¹⁾ The quoted IEC standards are also released as EN standards with the same number and identical contents

Characteristics

Item	Characteristics	Test Method
1. Operating Temp. Range 使用温度范围	-55°C ~ 155°C	
2. Temperature Coefficient 温度系数	±100ppm/°C ; ±50ppm/°C ±25ppm/°C ; ±15ppm/°C	JIS-C-5202; 5.2
3. Short time overload 短时间过负载	±(0.5%+0.05Ω)	Rating voltage×2.5 or Max. overload voltage for 5 sec. Whichever less
4. Pulse overload 断续过负载	±(0.5%+0.05Ω)	Rating voltage×3 or Max. pulse overload voltage for 10,000 cycle (1 sec. "on" 25 sec. "off"), Whichever less
5. Temperature cycling 温度周率	±(0.5%+0.05Ω)	-55°C(30min.)+85°C(30min.) for 5 cycle
6. Load Life in Humidity 耐湿负载	±(1%+0.05Ω)	40°C±2°C, 90%~95% RH, 1000h, 1.5h "on"/0.5h "off" cycle
7. Load Life 寿命负载	±(1%+0.05Ω)	70°C±2°C, 1000h, 1.5h "on"/0.5h "off" cycle
8. Resistance to soldering heat 焊接耐热性	±(0.5%+0.05Ω)	260°C±5°C, 5 sec±1 sec
9. Solderability 焊接性	90% Coverage/Min	235°C±5°C, 2 sec±0.5 sec
10. Bending test 端子强度	±(0.5%+0.05Ω)	Holding point width 90mm, Bending 5mm, 1 time
11. Non-Combustibility 不燃性	The resistors shall withstand Overload test in accordance With Article UL-94, V-0 without producing a fire hazard.	

Classification (Part No)

MELF-MFR 0207 1/2WS 121Ω F T 50
 STYLE SIZE POWER RESISTANCE TOLERANCE PACKING PPM

F = ±1% T = Tape/Reel 15
 D = ±0.5% B = Bulk 25
 C = ±0.25% 50
 B = ±0.1% 100
 J = ±5%

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