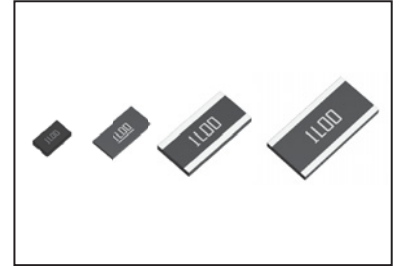


●Features

- 1) Ultra low-ohmic resistance range.
- 2) Wide terminal configuration for high joint reliability.
- 3) Improved current detection accuracy by trimming-less structure.
- 4) ROHM resistors have obtained ISO9001 / ISO / TS16949 certification.



●Products List

Part No.	Size		Rated Power (70°C) (W)	Temperature Coefficient (ppm / °C)	Resistance Tolerance (%)	Resistance Range (mΩ)	Operating Temperature Range (°C)
	(mm)	(inch)					
PML10	2012	0805	0.66	±200	J(±5%)	1.0, 1.5, 2.0, 2.5	-55 to +155
					G(±2%)		
PML18	3216	1206	1	±150	J(±5%)	0.5, 1.0, 1.5, 2.0, 2.5	
					G(±2%)		
☆PML50	5025	2010	1.5 (2W at 25°C)	±200	J(±5%)	0.5, 1.0, 1.5, 2.0, 2.2	
PML100	6432	2512	2 (3W at 25°C)	±100	J(±5%)	1.0, 1.5, 2.0, 2.2	
			2	±150		0.5	

☆: Under development

*Design and specifications are subject to change without notice.

Carefully check the specification sheet supplied with the product before using or ordering it.

●Part Number Description

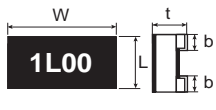
P M L	1 0	E Z P	J	V	1 L 0																																															
Part No. PML (Ultra-low Ohmic Chip Resistors for Current Detection / Wide terminal type)	Size (mm [inch]) 10 (2012 [0805]) 18 (3216 [1206]) 50 (5025 [2010]) 100 (6432 [2512])	Packaging Specifications Code	Resistance Tolerance G (±2%) J (±5%)	Special part code	Nominal Resistance																																															
		<table border="1"> <thead> <tr> <th>Part No.</th> <th>Code</th> <th>Packaging specifications</th> <th>Quantity / Reel</th> </tr> </thead> <tbody> <tr> <td>PML10</td> <td>EZP</td> <td>Paper tape (4mm Pitch)</td> <td>5,000</td> </tr> <tr> <td>PML18</td> <td>EZP</td> <td>Paper tape (4mm Pitch)</td> <td>5,000</td> </tr> <tr> <td>PML50</td> <td>HZP</td> <td>Embossed tape (4mm Pitch)</td> <td>2,000</td> </tr> <tr> <td>PML100</td> <td>HZP</td> <td>Embossed tape (4mm Pitch)</td> <td>2,000</td> </tr> </tbody> </table>	Part No.	Code	Packaging specifications	Quantity / Reel	PML10	EZP	Paper tape (4mm Pitch)	5,000	PML18	EZP	Paper tape (4mm Pitch)	5,000	PML50	HZP	Embossed tape (4mm Pitch)	2,000	PML100	HZP	Embossed tape (4mm Pitch)	2,000			<table border="1"> <thead> <tr> <th colspan="3">Resistance code, 3 or 4 digits.</th> </tr> <tr> <th>Resistance Value(Ω)</th> <th colspan="2">Resistance Tolerance</th> </tr> <tr> <th></th> <th>J</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>0.5mΩ</td> <td>0L5</td> <td>0L50</td> </tr> <tr> <td>1mΩ</td> <td>1L0</td> <td>1L00</td> </tr> <tr> <td>1.5mΩ</td> <td>1L5</td> <td>1L50</td> </tr> <tr> <td>2mΩ</td> <td>2L0</td> <td>2L00</td> </tr> <tr> <td>2.2mΩ</td> <td>2L2</td> <td>—</td> </tr> <tr> <td>2.5mΩ</td> <td>2L5</td> <td>2L50</td> </tr> </tbody> </table>	Resistance code, 3 or 4 digits.			Resistance Value(Ω)	Resistance Tolerance			J	G	0.5mΩ	0L5	0L50	1mΩ	1L0	1L00	1.5mΩ	1L5	1L50	2mΩ	2L0	2L00	2.2mΩ	2L2	—	2.5mΩ	2L5	2L50
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2.2mΩ	2L2	—																																																		
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●Chip Resistor Dimensions and Markings

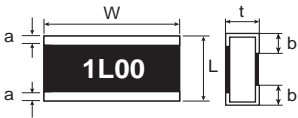
■ PML10 / 18

■ PML50 / 100

(Top)



(Top)



<Marking method>

There are four digits used for the calculation number "L" is used for the decimal point of mΩ.

Ex.) 2mΩ = 2L00
10mΩ = 10L0

(Bottom)



(Bottom)



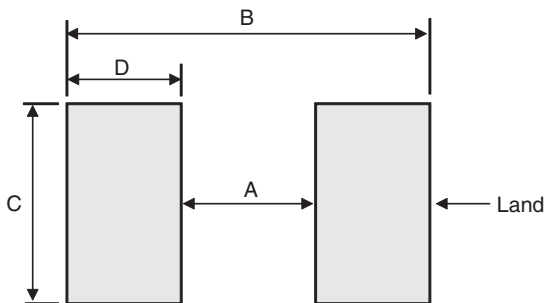
(Unit : mm)

Part No.	(mm)	(inch)	L	W	t	a	b	Marking existence
PML10	2102	0805	1.2±0.15	2.0±0.15	0.42±0.15	—	0.45 to 0.3*±0.2	Yes
PML18	3216	1206	1.6±0.15	3.2±0.15	0.42 to 0.28*±0.15	—	0.55 to 0.3*±0.2	Yes
☆ PML50	5025	2010	2.5±0.2	5.0±0.2	0.52 to 0.32*±0.15	0.4±0.2	1.0 to 0.5*±0.2	Yes
PML100	6432	2512	3.2±0.25	6.4±0.25	0.5 to 0.36*±0.15	0.45±0.25	0.9 to 0.7*±0.25	Yes

☆: Under development

* : Each value range varies with the resistance. Please contact a ROHM sales representative for further details.

●Land pattern Example



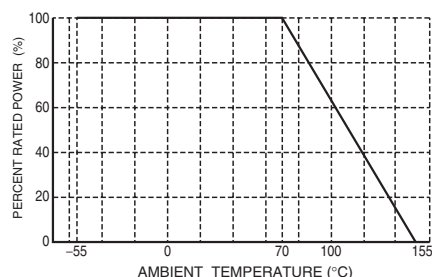
(Unit : mm)

Part No.	Dimensions	A	B	C	D
PML10		0.14	1.6	2.0	0.73
PML18		0.325	2.675	3.2	1.175
☆ PML50		0.8	3.35	5.0	1.275
PML100		0.8	4.2	6.4	1.7


●Derating Curve

When the ambient temperature exceeds 70°C, power dissipation must be adjusted according to the derating curves below.

■ PML10 / 18 / 50 / 100



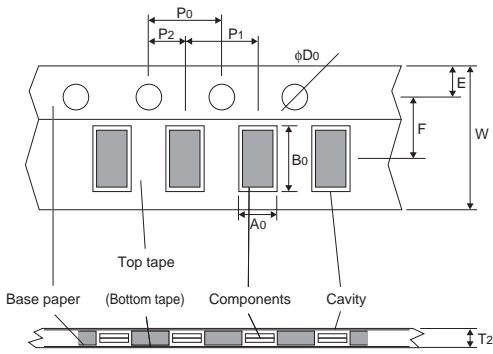
●Characteristics (PML10 / 18 / 100)

Test Items	Guaranteed Value	Test Conditions
	Resistor Type	
Resistance	See P.1	20°C (Under terminations) Measuring method : Measure under terminations by 4 probes. 
Variation of resistance with temperature	See P.1	Measurement : +20 / -55 / +20 / +125°C
Overload	± (2.0%+0.0001Ω)	Rated power ×2.5, 2s
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	Rosin-Ethanol : 25% (Weight) Soldering condition : 235±5°C Duration of immersion : 2.0±0.5s
Resistance to soldering heat	± (1.0%+0.0001Ω) No remarkable abnormality on the appearance.	Soldering condition : 260±5°C Duration of immersion : 10±1s
Rapid change of temperature	± (1.0%+0.0001Ω)	Test temp. : -55°C to +125°C 5cycle
Damp heat, steady state	± (3.0%+0.0001Ω)	40°C, 93%RH (Relative Humidity) Test time : 1,000h to 1,048h
Endurance at 70°C	± (3.0%+0.0001Ω)	70°C Rated power 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	± (3.0%+0.0001Ω)	155°C Test time : 1,000h to 1,048h
Resistance to solvent	± (0.5%+0.0001Ω)	23±5°C, Immersion cleaning, 5±0.5min Solvent : 2-propanol
Bend strength of the end face plating	Without mechanical damage such as breaks.	-

Compliance Standard(s) : IEC60115-8
JISC 5201-8

●Tape Dimensions

■ Paper Tape

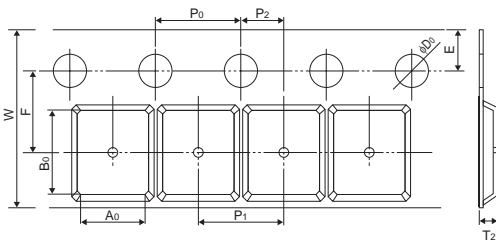


(Unit : mm)

Part No.	W	F	E	A0	B0
PML10	8.0±0.3	3.5±0.05	1.75±0.1	1.65 ^{+0.2} _{-0.1}	2.4 ^{+0.2} _{-0.1}
PML18	8.0±0.3	3.5±0.05	1.75±0.1	1.95 ^{+0.1} _{-0.05}	3.5 ^{+0.15} _{-0.05}

Part No.	D0	P0	P1	P2	T2
PML10	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
PML18	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

■ Embossed Tape



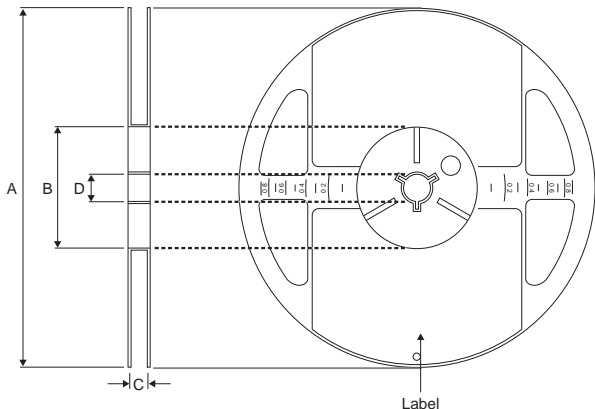
(Unit : mm)

Part No.	W	F	E	A0	B0
☆ PML50	12.0±0.3	5.5±0.05	1.75±0.1	2.9±0.2	5.3±0.2
PML100	12.0±0.3	5.5±0.05	1.75±0.1	3.5±0.2	6.7±0.2

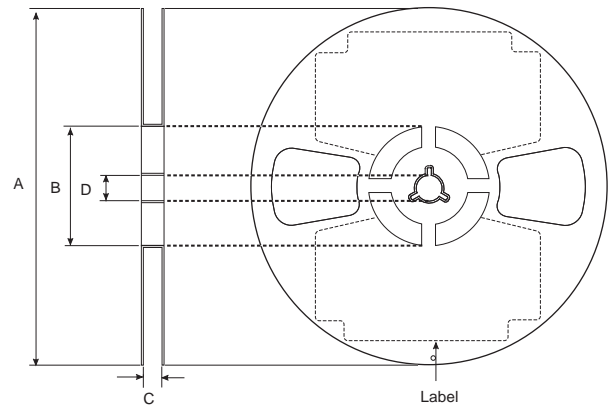
Part No.	D0	P0	P1	P2	T2
☆ PML50	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1
PML100	φ1.5 ^{+0.1} ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max 1.1

☆: Under development

●Reel Dimensions



ACCORDING TO EIAJ ET-7200B



ACCORDING TO EIAJ ET-7200B (RRV)

(Unit : mm)

Part No.	A	B	C	D
PML10	φ180 ⁰ _{-1.5}	φ60 ^{+1.0} ₀	9 ^{+1.0} ₀	φ13±0.2
PML18			13 ^{+1.0} ₀	
☆ PML50				
PML100				

☆: Under development

Notes

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- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
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- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
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- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
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