



Features

- Formerly J.W. Miller® model
- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic surface mounting
- Wide inductance range (0.1 nH to 1000 µH)
- RoHS compliant*

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PM1812 Series SMT Chip Inductors

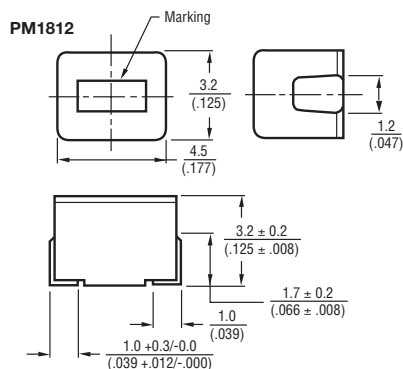
General Specifications

Temperature Rise	20 °C max.
Ambient Temperature	100 °C max.
Operating Temperature	-40 °C to +125 °C
Storage Temperature	-40 °C to +125 °C

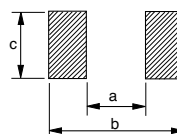
Materials

Core	Ferrite
Coil Type	Copper wire
Enclosure	Epoxy resin
Terminal Finish	Sn

Product Dimensions



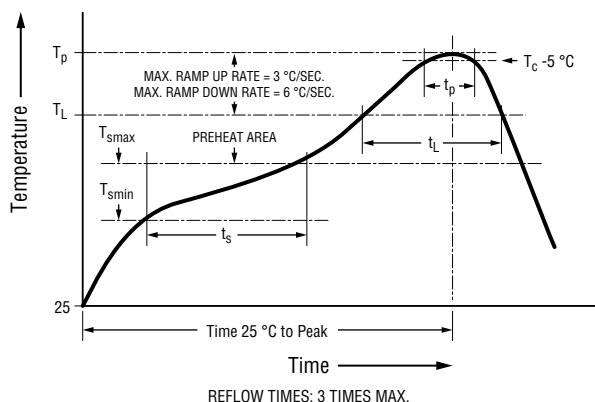
Recommended Land Pattern Dimensions



Model	a	b	c
PM1812	$\frac{2.4 \text{ to } 2.6}{(.094 \text{ to } .102)}$	$\frac{5.5 \text{ to } 6.0}{(.217 \text{ to } .236)}$	$\frac{2.0 \text{ to } 3.0}{(.079 \text{ to } .118)}$

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Soldering Profile



Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time (t_s) from T_{smin} to T_{smax}	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Classification Temperature (T_c)	250 °C
Time (t_p) at $T_c - 5\text{ °C}$ (T_p should be equal to or less than T_c)	< 30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.



CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Applications

- DC/DC converters
- Power supplies
- General use

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Electrical Characteristics

RoHS Compliant 1812 Size Part Number	Inductance μ H	Tolerance	Q Min.	Test Freq. MHz	SRF Typ. MHz	RDC Ohms Max.	IDC mA Max.
PM1812-R10K-RC	0.10	±10 %	35	25.2	780.0	0.18	800
PM1812-R12K-RC	0.12	±10 %	35	25.2	735.0	0.2	770
PM1812-R15K-RC	0.15	±10 %	35	25.2	615.0	0.22	730
PM1812-R18K-RC	0.18	±10 %	35	25.2	570.0	0.24	700
PM1812-R22K-RC	0.22	±10 %	40	25.2	505.0	0.25	665
PM1812-R27K-RC	0.27	±10 %	40	25.2	450.0	0.26	635
PM1812-R33K-RC	0.33	±10 %	40	25.2	425.0	0.28	605
PM1812-R39K-RC	0.39	±10 %	40	25.2	390.0	0.30	575
PM1812-R47K-RC	0.47	±10 %	40	25.2	350.0	0.32	545
PM1812-R56K-RC	0.56	±10 %	40	25.2	325.0	0.36	520
PM1812-R68K-RC	0.68	±10 %	40	25.2	300.0	0.40	500
PM1812-R82K-RC	0.82	±10 %	40	25.2	275.0	0.45	475
PM1812-1R0J-RC	1.0	±5 %	50	7.96	250.0	0.50	450
PM1812-1R2J-RC	1.2	±5 %	50	7.96	240.0	0.55	430
PM1812-1R5J-RC	1.5	±5 %	50	7.96	210.0	0.60	410
PM1812-1R8J-RC	1.8	±5 %	50	7.96	190.0	0.65	390
PM1812-2R2J-RC	2.2	±5 %	50	7.96	160.0	0.70	380
PM1812-2R7J-RC	2.7	±5 %	50	7.96	150.0	0.75	370
PM1812-3R3J-RC	3.3	±5 %	50	7.96	110.0	0.80	355
PM1812-3R9J-RC	3.9	±5 %	50	7.96	100.0	0.90	330
PM1812-4R7J-RC	4.7	±5 %	50	7.96	80.0	1.00	315
PM1812-5R6J-RC	5.6	±5 %	50	7.96	50.0	1.10	300
PM1812-6R8J-RC	6.8	±5 %	50	7.96	35.0	1.2	285
PM1812-8R2J-RC	8.2	±5 %	50	7.96	28.0	1.4	270
PM1812-100J-RC	10	±5 %	50	2.52	22.0	1.6	250
PM1812-120J-RC	12	±5 %	50	2.52	20.0	2	225
PM1812-150J-RC	15	±5 %	50	2.52	18.0	2.5	200
PM1812-180J-RC	18	±5 %	50	2.52	16.0	2.8	190
PM1812-220J-RC	22	±5 %	50	2.52	14.0	3.2	180
PM1812-270J-RC	27	±5 %	50	2.52	13.0	3.6	170
PM1812-330J-RC	33	±5 %	50	2.52	12.0	4	160
PM1812-390J-RC	39	±5 %	50	2.52	11.0	4.5	150
PM1812-470J-RC	47	±5 %	50	2.52	10.5	5	140
PM1812-560J-RC	56	±5 %	50	2.52	10.0	5.5	135
PM1812-680J-RC	68	±5 %	50	2.52	9.5	6	130
PM1812-820J-RC	82	±5 %	50	2.52	8.5	7	120
PM1812-101J-RC	100	±5 %	40	2.52	8.0	8	110
PM1812-121J-RC	120	±5 %	40	0.796	7.0	8	110
PM1812-151J-RC	150	±5 %	40	0.796	6.0	9	105
PM1812-181J-RC	180	±5 %	40	0.796	5.5	9.5	102
PM1812-221J-RC	220	±5 %	40	0.796	5.0	10	100
PM1812-271J-RC	270	±5 %	40	0.796	4.5	12	92
PM1812-331J-RC	330	±5 %	40	0.796	4.0	14	85
PM1812-391J-RC	390	±5 %	40	0.796	3.5	18	80
PM1812-471J-RC	470	±5 %	40	0.796	3.5	26	62
PM1812-561J-RC	560	±5 %	30	0.796	3.0	30	50
PM1812-681J-RC	680	±5 %	30	0.796	3.0	30	50
PM1812-821J-RC	820	±5 %	30	0.796	2.5	35	30
PM1812-102J-RC	1000	±5 %	20	0.252	2.5	40	30

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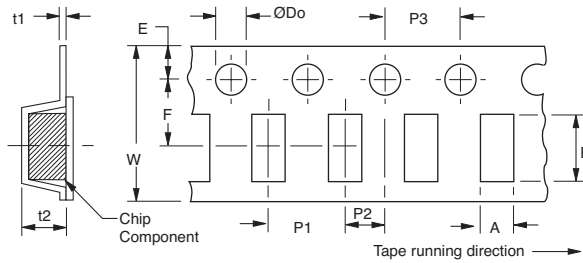
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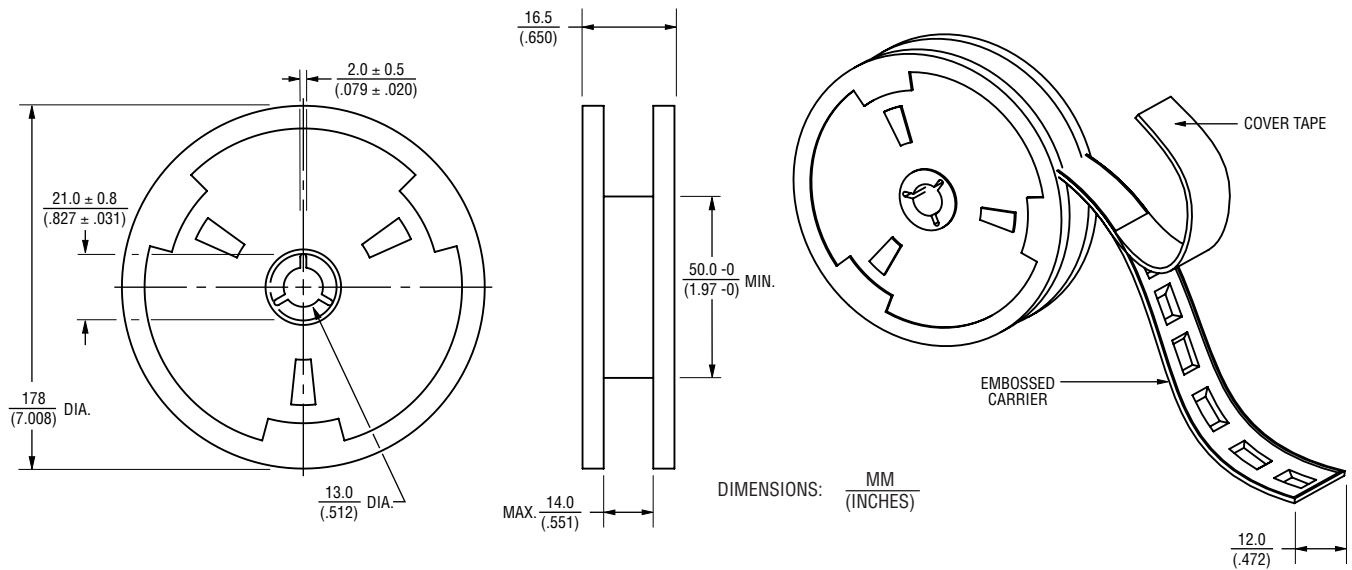
Packaging Specifications



Model	Quantity	Weight
PM1812	500 pcs.	100 g

Model	A	B	W	F	E	P1	P2	P3	ϕD_0	ϕD_1	t1	t2
PM1812	$\frac{3.60}{(.142)}$	$\frac{4.90}{(.193)}$	$\frac{12.00}{(.472)}$	$\frac{5.50}{(.217)}$	$\frac{1.75}{(.069)}$	$\frac{8.00}{(.315)}$	$\frac{2.00}{(.079)}$	$\frac{4.00}{(.157)}$	$\frac{1.50}{(.059)}$	—	$\frac{0.30}{(.012)}$	$\frac{3.50}{(.138)}$

Reel Dimensions



REV. 03/26

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