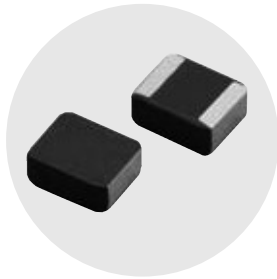


# PSM series



### FEATURES

- High saturation current realized by material properties and structure design. Low DC resistance to achieve high conversion efficiency and lower temperature rising

### APPLICATIONS

- Apply in portable DC to DC converter line, Smart phone, PAD , Network etc..

### EXPLANATION OF PART NUMBER

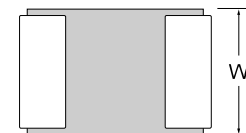
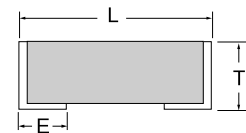
<b>PSM</b>	<b>2016</b>	<b>10</b>	<b>P</b>	<b>—</b>	<b>2R2</b>	<b>M</b>	<b>L</b>
1	2	3	4		5	6	7

- 1: Series Name: Wire-wound type power inductor
- 2: Size Code: The first two digitals: length(mm), The last two digitals: width(mm)
- 3: Thickness in mm
- 4: Material code: Iron powder
- 5: Initial inductance value: 2R2 = 2.2μH
- 6: Model code, Tolerance of Inductance ±20%
- 7: Electrode type

### DIMENSION Unit: mm

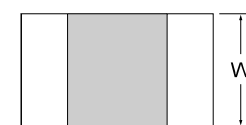
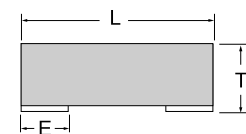
#### P/S/A/T TYPE

Size (EIA)	201208/10 (0805)	201610 (0806)	252010/12 (1008)	322512 (1210)
<b>L</b>	2.00±0.20	2.00±0.20	2.50±0.20	3.20±0.20
<b>W</b>	1.20±0.20	1.60±0.20	2.00±0.20	2.50±0.20
<b>T</b>	0.80/1.00 MAX	1.00 MAX	1.00/1.20 MAX	1.20 MAX
<b>E</b>	0.50±0.20	0.50±0.30	0.60±0.30	0.60±0.30



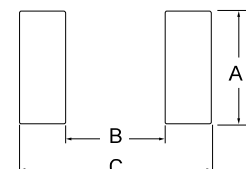
#### V TYPE

Size (EIA)	141208/10 (05505)	201208 /10 (0806)
<b>L</b>	1.40±0.20	2.00±0.20
<b>W</b>	1.20±0.20	1.20±0.20
<b>T</b>	0.80 MAX	0.80 /1.00 MAX
<b>E</b>	0.40±0.15	0.50±0.20



### RECOMMEND LAND PATTERN DIMENSIONS Unit: mm

Size (EIA)	A	B	C
<b>1412 (05505)</b>	1.2	0.43	1.5
<b>2012 (0805)</b>	1.2	0.9	2.0
<b>2016 (0806)</b>	1.6	0.9	2.0
<b>2520 (1008)</b>	2.0	1.2	2.8
<b>3225 (1008)</b>	2.5	1.7	3.2



### Reel Packaging Quantity

Part Size (EIA Size)	1412 (0505)	2012 (0805)	2016 (0806)	2520 (1008)	3225 (1210)
Quantity (pcs)	3000	3000	3000	3000	3000

# PSM P series

## PART NUMBERS & CHARACTERISTICS

PSM P series	Dimension (mm)			Inductance ( $\mu\text{H}$ )		DCR ( $\text{m}\Omega$ )		Isat (A)		Irms (A)	
	L	W	T	Value	Tolerance (%)	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>PSM 2016P Series</b>											
PSM201610P-R24ML	2.0	1.6	1.0	0.24	20%	17	21	5.60	5.05	5.00	4.50
PSM201610P-R33ML	2.0	1.6	1.0	0.33	20%	24	29	5.00	4.50	4.10	3.69
PSM201610P-R47ML	2.0	1.6	1.0	0.47	20%	33	40	4.40	4.00	3.50	3.15
PSM201610P-R68ML	2.0	1.6	1.0	0.68	20%	41	49	3.70	3.33	3.40	3.06
PSM201610P-1R0ML	2.0	1.6	1.0	1.00	20%	60	69	2.90	2.61	2.60	2.26
PSM201610P-1R5ML	2.0	1.6	1.0	1.50	20%	114	129	2.50	2.25	2.00	1.81
PSM201610P-2R2ML	2.0	1.6	1.0	2.20	20%	135	150	1.90	1.71	1.70	1.50
<b>PSM 2520P Series</b>											
PSM252010P-R22ML	2.5	2.0	1.0	0.22	20%	9	12.5	7.90	7.20	5.90	5.30
PSM252010P-R33ML	2.5	2.0	1.0	0.33	20%	21	26	6.60	6.00	4.40	4.00
PSM252010P-R47ML	2.5	2.0	1.0	0.47	20%	27	32	5.00	4.50	3.90	3.51
PSM252010P-R68ML	2.5	2.0	1.0	0.68	20%	37	44	4.30	3.87	3.40	3.06
PSM252010P-1R0ML	2.5	2.0	1.0	1.00	20%	45	54	3.50	3.15	3.00	2.70
PSM252010P-1R5ML	2.5	2.0	1.0	1.50	20%	76	91	2.60	2.34	2.50	2.25
PSM252010P-2R2ML	2.5	2.0	1.0	2.20	20%	99	119	2.40	2.16	2.30	2.07
PSM252010P-4R7ML	2.5	2.0	1.0	4.70	20%	220	262	1.80	1.62	1.36	1.22
PSM252012P-R47ML	2.5	2.0	1.2	0.47	20%	21	25	5.30	4.95	4.60	4.18
PSM252012P-R68ML	2.5	2.0	1.2	0.68	20%	29	35	5.00	4.63	3.70	3.36
PSM252012P-1R0ML	2.5	2.0	1.2	1.00	20%	41	49	4.40	4.04	3.50	3.18
PSM252012P-1R5ML	2.5	2.0	1.2	1.50	20%	64	77	3.20	2.91	2.50	2.27
PSM252012P-2R2ML	2.5	2.0	1.2	2.20	20%	85	98	3.00	2.73	2.27	2.06
PSM252012P-3R3ML	2.5	2.0	1.2	3.30	20%	125	150	2.10	1.80	2.00	1.80
PSM252012P-4R7ML	2.5	2.0	1.2	4.70	20%	196	235	1.90	1.58	1.61	1.40
Test Instruments and Conditions	Inductance is measured with Agilent® LCR meter 4285A (or equivalent) at 1MHz/1V. DC resistance is measured with HIOKI® micro-ohm meter RM3542 or equivalent.										

## PSM S series

### PART NUMBERS & CHARACTERISTICS

PSM S series	Dimension (mm)			Inductance ( $\mu\text{H}$ )		DCR ( $\text{m}\Omega$ )		Isat (A)		Irms (A)	
	L	W	T	Value	Tolerance (%)	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>PSM 2016S Series</b>											
PSM201610S-R10ML	2.0	1.6	1.0	0.10	20%	10	12	9.00	8.10	6.00	5.40
PSM201610S-R33ML	2.0	1.6	1.0	0.33	20%	21	26	6.70	6.10	4.70	4.00
PSM201610S-R47ML	2.0	1.6	1.0	0.47	20%	23	30	6.10	5.30	4.50	4.05
PSM201610S-1R0ML	2.0	1.6	1.0	1.00	20%	48	60	3.90	3.30	3.20	3.00
PSM201610S-1R5ML	2.0	1.6	1.0	1.50	20%	86	99	3.40	3.10	2.40	2.20
PSM201610S-2R2ML	2.0	1.6	1.0	2.20	20%	117	140	2.60	2.45	2.20	2.00
PSM201610S-2R2ML	2.0	1.6	1.0	2.20	20%	117	140	2.60	2.45	2.20	2.00
<b>PSM 2520S Series</b>											
PSM252010S-R33ML	2.5	2.0	1.0	0.33	20%	17	22	7.80	7.00	5.60	4.80
PSM252010S-R47ML	2.5	2.0	1.0	0.47	20%	23	29	6.60	6.00	5.20	4.40
PSM252010S-1R0ML	2.5	2.0	1.0	1.00	20%	41	52	4.40	4.00	3.40	3.10
PSM252010S-2R2ML	2.5	2.0	1.0	2.20	20%	88	110	3.30	3.00	2.40	2.10
PSM252012S-R47ML	2.5	2.0	1.2	0.47	20%	16	22	6.80	6.20	5.80	4.90
PSM252012S-1R0ML	2.5	2.0	1.2	1.00	20%	36	44	4.80	4.30	3.90	3.30
PSM252012S-2R2ML	2.5	2.0	1.2	2.20	20%	74	89	3.50	3.20	2.50	2.20
PSM252012S-4R7ML	2.5	2.0	1.2	4.70	20%	160	180	2.50	2.20	1.80	1.50
Test Instruments and Conditions	Inductance is measured with Agilent® LCR meter 4285A (or equivalent) at 1MHz/1V. DC resistance is measured with HIOKI® micro-ohm meter RM3542 or equivalent.										

## PSM A/T series

### PART NUMBERS & CHARACTERISTICS

PSM A/T Series	Dimension (mm)			Inductance ( $\mu\text{H}$ )		DCR ( $\text{m}\Omega$ )		Isat (A)		Irms (A)	
	L	W	T	Value	Tolerance (%)	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>PSM 2520T Series</b>											
PSM252010T-R47ML	2.5	2.0	1.0	0.47	20%	17	21	6.60	6.00	5.80	4.90
PSM252010T-1R0ML	2.5	2.0	1.0	1.00	20%	35	40	5.30	4.70	3.90	3.30
<b>PSM 3225A Series</b>											
PSM322512A-R47ML	3.2	2.5	1.2	0.47	20%	18	22	7.70	7.00	5.80	5.20
PSM322512A-1R0ML	3.2	2.5	1.2	1.00	20%	25	32	5.40	4.70	4.30	3.90
PSM322512A-2R2ML	3.2	2.5	1.2	2.20	20%	60	72	4.00	3.50	3.00	2.70
PSM322512A-3R3ML	3.2	2.5	1.2	3.30	20%	140	168	2.20	1.80	1.70	1.40
PSM322512A-4R7ML	3.2	2.5	1.2	4.70	20%	190	210	2.40	2.10	1.50	1.20
Test Instruments and Conditions	Inductance is measured with Agilent® LCR meter 4285A (or equivalent) at 1MHz/1V. DC resistance is measured with HIOKI® micro-ohm meter RM3542 or equivalent.										

## PSM Y series

### PART NUMBERS & CHARACTERISTICS

PSM Y series	Dimension (mm)			Inductance ( $\mu$ H)		DCR ( $m\Omega$ )		Isat (A)		Irms (A)	
	L	W	T	Value	Tolerance (%)	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>PSM 2012Y Series</b>											
PSM201208Y-R47ML	2.0	1.2	0.8	0.47	20%	29	35	4.60	4.20	4.00	3.70
PSM201210Y-1R0ML*	2.0	1.2	1.0	1.00	20%	58	67	3.40	3.10	3.00	2.70
<b>PSM 2016Y Series</b>											
PSM201610Y-R47ML	2.0	1.6	1.0	0.47	20%	19	23	5.70	5.00	5.30	4.70
PSM201610Y-1R0ML	2.0	1.6	1.0	1.00	20%	37	44	5.70	5.00	2.90	2.60
Test Instruments and Conditions	Inductance is measured with Agilent® LCR meter 4285A (or equivalent) at 1MHz/1V. DC resistance is measured with HIOKI® micro-ohm meter RM3542 or equivalent.										

\*\*\* New Part , please contact INPAQ for detail specification

## PSM V series

### PART NUMBERS & CHARACTERISTICS

PSM V Series	Dimension (mm)			Inductance ( $\mu$ H)		DCR ( $m\Omega$ )		Isat (A)		Irms (A)	
	L	W	T	Value	Tolerance (%)	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>PSM 1412V Series</b>											
PSM141208V-R33M*	1.4	1.2	0.8	0.33	20%	25	28	5.60	5.00	4.10	3.70
PSM141208V-R47M*	1.4	1.2	0.8	0.47	20%	28	35	4.90	4.50	3.70	3.50
PSM141210V-1R0M*	1.4	1.2	1.0	1.00	20%	51	58	2.40	2.20	1.70	1.50
<b>PSM 2012V Series</b>											
PSM201208V-R47M	2.0	1.2	0.8	0.47	20%	21	25	5.50	4.80	4.40	4.00
PSM201208V-1R0M*	2.0	1.2	0.8	1.00	20%	45	53	3.80	3.40	3.40	4.00
Test Instruments and Conditions	Inductance is measured with Agilent® LCR meter 4285A (or equivalent) at 1MHz/1V. DC resistance is measured with HIOKI® micro-ohm meter RM3542 or equivalent.										

\*\*\* New Part , please contact INPAQ for detail specification

# Reliability and Test Condition

## For PSM Products

Test item	Test condition	Criteria
<b>Resistance to Solder Heat</b>	<ol style="list-style-type: none"> <li>1. Solder temperature : 260 ±5°C</li> <li>2. Flux : Rosin</li> <li>3. DIP time : 10 ±1 sec</li> </ol>	<ol style="list-style-type: none"> <li>1. More than 95% of terminal electrode should be covered with new solder</li> <li>2. No mechanical damage</li> <li>3. Inductance value should be within ±20% of the initial value</li> </ol>
<b>Adhesive Test</b>	<ol style="list-style-type: none"> <li>1. Reflow temperature : 245°C It shall be Soldered on the substrate applying direction parallel to the substrate</li> <li>2. Apply force (F) : 5 N</li> <li>3. Test time : 10 sec</li> </ol>	<ol style="list-style-type: none"> <li>1. No mechanical damage</li> <li>2. Soldering the products on PCB after the pulling test force &gt; 5 N</li> </ol>
<b>Temperature Cycle</b>	<ol style="list-style-type: none"> <li>1. Temperature:-50 ~ 125°C For 30 minutes each</li> <li>2. Cycle: 500 cycles</li> <li>3. Measurement: At ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>1. No mechanical damage</li> <li>2. Inductance should be within ±20% of the initial value</li> </ol>
<b>Dry Heat Test</b>	<ol style="list-style-type: none"> <li>1. Temperature: 85 ±2°C</li> <li>2. Testing time: 500 hrs</li> <li>3. Applied current: Full rated current</li> <li>4. Measurement: At ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>1. No mechanical damage</li> <li>2. Inductance should be within ±20% of the initial value</li> </ol>
<b>Humidity Test</b>	<ol style="list-style-type: none"> <li>1. Temperature: 60 ± 2°C</li> <li>2. Humidity: 90 ~ 95% RH</li> <li>3. Applied current: Full rated current</li> <li>4. Testing time: 500 hrs</li> <li>5. Measurement: At ambient temperature 24 hours after test completion</li> </ol>	<ol style="list-style-type: none"> <li>1. No mechanical damage</li> <li>2. Inductance should be within ±20% of the initial value</li> </ol>