

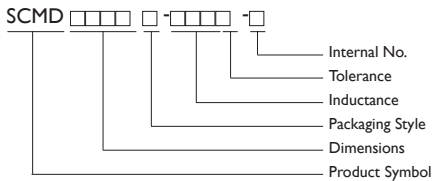
# SMD Unshielded Power Inductors

# SCMD Series

Low DC Resistance & For Large Current Applications



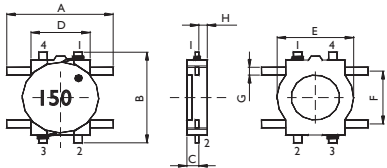
## PRODUCT IDENTIFICATION



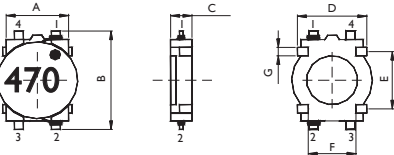
- Packaging: T: Tape and Reel
- Tolerance: M±20%
- Note: YAGEO will start to release SCMD Series inductors with lead-free terminals that meet SONY SS-00259's criteria for lead-free product in Q2 of 2004, and YAGEO Internal No. will be changed to "N" as identification. Ex.: SCMD4D06T-2R2 M-N

## SHAPES AND DIMENSIONS

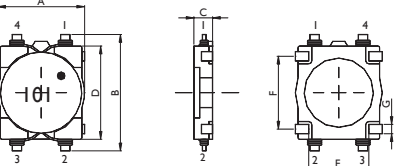
SCMD 4D06 & 4D08



SCMD 4D11 & 4D13



SCMD 5D11 & 5D13



## FEATURES

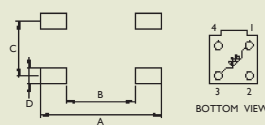
- Available in magnetically shielded.
- Low DC resistance.
- Suitable for large currents.
- Ideal for a variety of DC - Dc converter inductor applications.
- Available on tape and reel for auto surface mounting

## APPLICATIONS

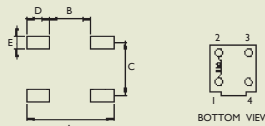
- power supply for VTRs.
- OA equipment.
- LCD televisions.
- Notebook PCs.
- Portable communication equipment.
- DC / DC converters, etc.

## RECOMENDED PATTERN

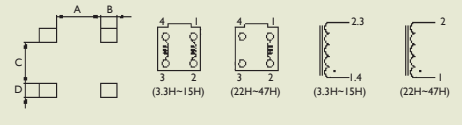
SCMD 4D06 & 4D08



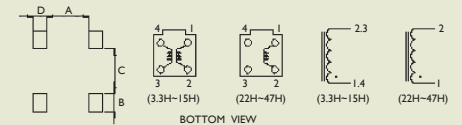
SCMD 4D11 & 4D13



SCMD 5D11



SCMD 5D13



## SHAPES AND DIMENSIONS

TYPE	A Max	B Max	C Max	D	E	F	G	H
SCMD4D06	6.3	5.8	0.8	3.5	4.1	3.2	0.5	0.4
SCMD4D08	6.3	5.8	1.0	3.5	4.1	3.2	0.5	0.4
SCMD4D11	4.4	5.8	1.25	3.7	3.2	2.9	0.5	
SCMD4D13	4.4	5.8	1.45	3.7	3.2	2.9	0.5	
SCMD5D11	5.8	7.4	1.2	6.0	4.2	4.5	0.6	
SCMD5D13	5.8	7.4	1.5	6.0	4.2	4.5	0.6	

## RECOMENDED PATTERN

TYPE	A	B	C	D	E
SCMD4D06	7	4	3.2	0.9	
SCMD4D08	7	4	3.2	0.9	
SCMD4D11	5.3	2.5	3.2	1.4	0.8
SCMD4D13	5.3	2.5	3.2	1.4	0.8
SCMD5D11	3.6	1.4	3.4	1.1	
SCMD5D13	3.6	1.4	3.6	1.1	



## STANDARD SPECIFICATIONS

Stamp	Inductance ( $\mu$ H)	D.C.R( $\Omega$ ) Max.						Rated D.C. Current(A)					
		SCMD		SCMD		SCMD		SCMD		SCMD		SCMD	
		4D06	4D08	4D11	4D13	5D11	5D13	4D06	4D08	4D11	4D13	5D11	5D13
2R2	2.2	0.116		0.116				0.95		0.95			
3R3	3.3	0.174	0.160	0.174	0.160	0.109	0.081	0.77	0.85	0.77	0.85	0.94	1.25
4R7	4.7	0.216	0.194	0.216	0.194	0.156	0.106	0.75	0.80	0.75	0.80	0.80	1.20
6R8	6.8	0.296	0.276	0.296	0.276	0.216	0.144	0.62	0.65	0.62	0.65	0.65	0.90
100	10	0.457	0.335	0.457	0.335	0.275	0.187	0.50	0.57	0.50	0.57	0.54	0.85
150	15	0.676	0.508	0.676	0.508	0.438	0.300	0.40	0.45	0.40	0.45	0.40	0.57
220	22	1.066	0.766	1.066	0.766	0.663	0.431	0.30	0.37	0.30	0.37	0.36	0.54
330	33	1.647	1.162	1.647	1.162	0.975	0.637	0.24	0.28	0.24	0.28	0.32	0.28
470	47	2.843	1.658	2.843	1.658	1.38	0.875	0.18	0.22	0.18	0.22	0.26	0.35
680	68		2.534		2.534	1.70			0.18		0.18	0.23	
101	100		3.800		3.800	2.80			0.17		0.17	0.20	
151	150				5.362						0.13		

• Measuring Frequency (L) : 100KHz

• Tolerance of Inductance:  $\pm 20\%$ (M)

• Rated D.C Current (SCMD4D06/4D08/4D11/4D13/5D11)

This indicates the value of current when the inductance is 10% lower than its initial value at D.C superposition or D.C current when at  $\Delta t=40^{\circ}\text{C}$  whichever is lower.

• Rated D.C Current (SCMD5D13)

This indicates the value of current when the inductance is 65% more than its nominal value and the temperature is rising at  $\Delta t=40^{\circ}\text{C}$  lower at D.C superposition.

• Test Equipment:

L: HP4192. LF Impedance Analyzer or HP4284A.

DCR: CHEN HWA 502

Rared dc Current: HP4284A+HP42841A

## ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

TYPE	Inductance( $\mu$ H)	Test Freq(KHz)	RDC(m $\Omega$ )Max	Rated Current(A)Max
SCMD4D06T-2R2 <input type="checkbox"/> -N	2.2	100KHz, 1V	0.116	0.95
SCMD4D06T-3R3 <input type="checkbox"/> -N	3.3	100KHz, 1V	0.174	0.77
SCMD4D06T-4R7 <input type="checkbox"/> -N	4.7	100KHz, 1V	0.216	0.75
SCMD4D06T-6R8 <input type="checkbox"/> -N	6.8	100KHz, 1V	0.296	0.62
SCMD4D06T-100 <input type="checkbox"/> -N	10	100KHz, 1V	0.457	0.5
SCMD4D06T-150 <input type="checkbox"/> -N	15	100KHz, 1V	0.676	0.4
SCMD4D06T-220 <input type="checkbox"/> -N	22	100KHz, 1V	1.066	0.3
SCMD4D06T-330 <input type="checkbox"/> -N	33	100KHz, 1V	1.647	0.24
SCMD4D06T-470 <input type="checkbox"/> -N	47	100KHz, 1V	2.843	0.18



## ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

TYPE	Inductance( $\mu$ H)	Test Freq(KHz)	RDC(m $\Omega$ )Max	Rated Current(A)Max
SCMD4D08T-3R3 <input type="checkbox"/> -N	3.3	100KHz, IV	0.16	0.85
SCMD4D08T-4R7 <input type="checkbox"/> -N	4.7	100KHz, IV	0.194	0.8
SCMD4D08T-6R8 <input type="checkbox"/> -N	6.8	100KHz, IV	0.276	0.65
SCMD4D08T-100 <input type="checkbox"/> -N	10	100KHz, IV	0.335	0.57
SCMD4D08T-150 <input type="checkbox"/> -N	15	100KHz, IV	0.508	0.45
SCMD4D08T-220 <input type="checkbox"/> -N	22	100KHz, IV	0.766	0.37
SCMD4D08T-330 <input type="checkbox"/> -N	33	100KHz, IV	1.162	0.28
SCMD4D08T-470 <input type="checkbox"/> -N	47	100KHz, IV	1.658	0.22
SCMD4D08T-680 <input type="checkbox"/> -N	68	100KHz, IV	2.534	0.18
SCMD4D08T-101 <input type="checkbox"/> -N	100	100KHz, IV	3.8	0.17
SCMD4D11T-2R2 <input type="checkbox"/> -N	2.2	100KHz, IV	0.116	0.95
SCMD4D11T-3R3 <input type="checkbox"/> -N	3.3	100KHz, IV	0.174	0.77
SCMD4D11T-4R7 <input type="checkbox"/> -N	4.7	100KHz, IV	0.216	0.75
SCMD4D11T-6R8 <input type="checkbox"/> -N	6.8	100KHz, IV	0.296	0.62
SCMD4D11T-100 <input type="checkbox"/> -N	10	100KHz, IV	0.457	0.5
SCMD4D11T-150 <input type="checkbox"/> -N	15	100KHz, IV	0.676	0.4
SCMD4D11T-220 <input type="checkbox"/> -N	22	100KHz, IV	1.066	0.3
SCMD4D11T-330 <input type="checkbox"/> -N	33	100KHz, IV	1.647	0.24
SCMD4D11T-470 <input type="checkbox"/> -N	47	100KHz, IV	2.843	0.18
SCMD4D13T-3R3 <input type="checkbox"/> -N	3.3	100KHz, IV	0.16	0.85
SCMD4D13T-4R7 <input type="checkbox"/> -N	4.7	100KHz, IV	0.194	0.8
SCMD4D13T-6R8 <input type="checkbox"/> -N	6.8	100KHz, IV	0.276	0.65
SCMD4D13T-100 <input type="checkbox"/> -N	10	100KHz, IV	0.335	0.57
SCMD4D13T-150 <input type="checkbox"/> -N	15	100KHz, IV	0.508	0.45
SCMD4D13T-220 <input type="checkbox"/> -N	22	100KHz, IV	0.766	0.37
SCMD4D13T-330 <input type="checkbox"/> -N	33	100KHz, IV	1.162	0.28
SCMD4D13T-470 <input type="checkbox"/> -N	47	100KHz, IV	1.658	0.22
SCMD4D13T-680 <input type="checkbox"/> -N	68	100KHz, IV	2.534	0.18
SCMD4D13T-101 <input type="checkbox"/> -N	100	100KHz, IV	3.8	0.17
SCMD4D13T-151 <input type="checkbox"/> -N	150	100KHz, IV	5.362	0.13
SCMD5D11T-3R3 <input type="checkbox"/> -N	3.3	100KHz, IV	0.109	0.94
SCMD5D11T-4R7 <input type="checkbox"/> -N	4.7	100KHz, IV	0.156	0.8
SCMD5D11T-6R8 <input type="checkbox"/> -N	6.8	100KHz, IV	0.216	0.65
SCMD5D11T-100 <input type="checkbox"/> -N	10	100KHz, IV	0.275	0.54
SCMD5D11T-150 <input type="checkbox"/> -N	15	100KHz, IV	0.438	0.4
SCMD5D11T-220 <input type="checkbox"/> -N	22	100KHz, IV	0.663	0.36
SCMD5D11T-330 <input type="checkbox"/> -N	33	100KHz, IV	0.975	0.32
SCMD5D11T-470 <input type="checkbox"/> -N	47	100KHz, IV	1.38	0.26
SCMD5D11T-680 <input type="checkbox"/> -N	68	100KHz, IV	1.7	0.23
SCMD5D11T-101 <input type="checkbox"/> -N	100	100KHz, IV	2.8	0.2
SCMD5D13T-3R3 <input type="checkbox"/> -N	3.3	100KHz, IV	0.081	1.25
SCMD5D13T-4R7 <input type="checkbox"/> -N	4.7	100KHz, IV	0.106	1.2
SCMD5D13T-6R8 <input type="checkbox"/> -N	6.8	100KHz, IV	0.144	0.9
SCMD5D13T-100 <input type="checkbox"/> -N	10	100KHz, IV	0.187	0.85
SCMD5D13T-150 <input type="checkbox"/> -N	15	100KHz, IV	0.3	0.57
SCMD5D13T-220 <input type="checkbox"/> -N	22	100KHz, IV	0.431	0.54
SCMD5D13T-330 <input type="checkbox"/> -N	33	100KHz, IV	0.637	0.38
SCMD5D13T-470 <input type="checkbox"/> -N	47	100KHz, IV	0.875	0.35

NOTE :  -tolerance M=±20%

1. Operating temperature range -30°C~100°C

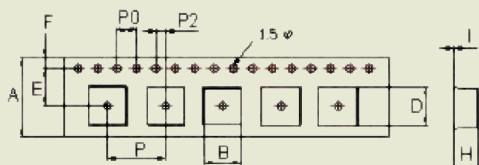
2. Rate current: Inductance drop = 10% typ.

3. This indicates the value of current when the inductance is 10% lower than its initial value at D.C superimposition or D.C current when at  $\Delta t=40^\circ\text{C}$  whichever is lower

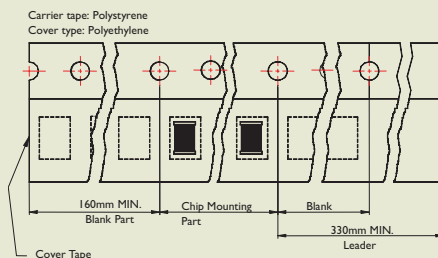


## PACKAGING SPECIFICATIONS

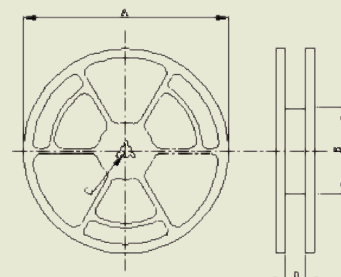
### Tape Dimensions



### Tape Material



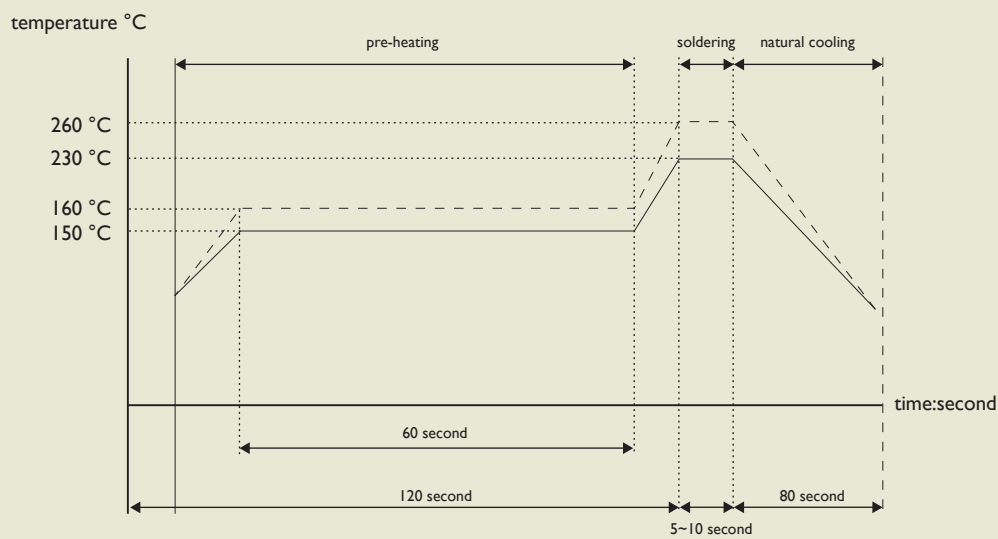
### Reel Dimensions



TYPE	TAPE DIMENSIONS										REEL DIMENSIONS				QUANTITY
	A	B	D	E	F	H	I	P	P0	P2	A	B	C	D	PCS/REEL
SCMD4D06	12	6	7	5.5	1.75	1.5	0.4	8	4	2	330	100	13	13.4	1000
SCMD4D08	12	6	7	5.5	1.75	1.7	0.4	8	4	2	330	100	13	13.4	1000
SCMD4D11	12	4.4	5.55	5.5	1.75	1.4	0.3	8	4	2	330	100	13	13.4	1000
SCMD4D13	12	4.4	5.55	5.5	1.75	1.4	0.3	8	4	2	330	100	13	13.4	1000
SCMD5D11	16	5.9	7.5	7.5	1.75	1.5	0.4	8	4	2	330	100	13	13.4	1000
SCMD5D13	16	5.9	7.5	7.5	1.75	1.8	0.4	8	4	2	330	100	13	13.4	1000

## RECOMMEND SOLDERING CONDITIONS

for: CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters, Transformers, Current Sensors



for: lead solder ———  
 for: lead-free solder ······