

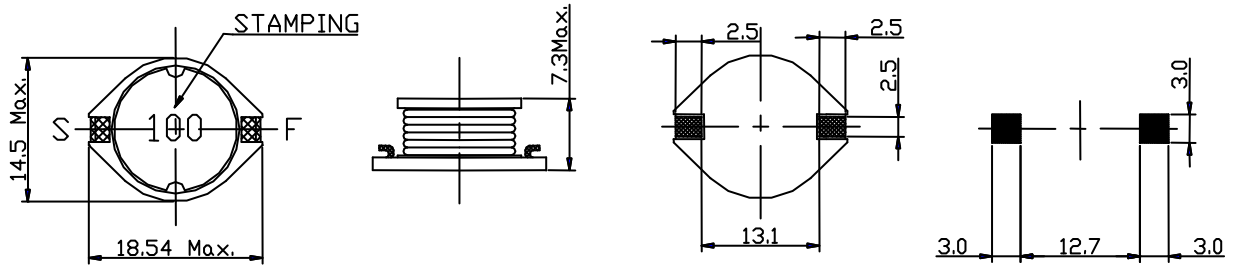


SMD POWER INDUCTORS

TYPE
DBS187CNP

SPECIFICATION

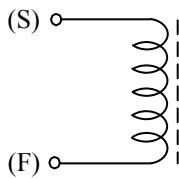
1. DIMENSION (UNIT : mm)



* DIMENSIONS WITHOUT TOLERANCE ARE APPROX.

RECOMMENDED
LAND PATTERN

2. CIRCUIT



“S” IS WINDING START.

3. ELECTRICAL CHARACTERISTICS

No.	PART No.	STAMP	INDUCTANCE (μ H) WITHIN	D.C.R. (m Ω) Max.	RATED CURRENT (A) Max.	
					Idc 1	Idc 2
01	DBS187CNP-R82M	R82	0.82 \pm 20%	7.0	25.00	10.20
02	DBS187CNP-1R3M	1R3	1.30 \pm 20%	8.0	22.00	8.30
03	DBS187CNP-1R8M	1R8	1.80 \pm 20%	11.0	21.00	8.20
04	DBS187CNP-2R7M	2R7	2.70 \pm 20%	12.0	20.00	7.60
05	DBS187CNP-3R3M	3R3	3.30 \pm 20%	14.0	19.00	6.70
06	DBS187CNP-3R9M	3R9	3.90 \pm 20%	16.0	18.00	6.00
07	DBS187CNP-5R2M	5R2	5.20 \pm 20%	20.0	16.00	5.80
08	DBS187CNP-6R8M	6R8	6.80 \pm 20%	22.0	14.50	5.00
09	DBS187CNP-8R2M	8R2	8.20 \pm 20%	25.0	13.00	4.70
10	DBS187CNP-100M	100	10.0 \pm 20%	31.0	12.00	4.50



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No.	PART No.	STAMP	INDUCTANCE (μ H) WITHIN	D.C.R. (m Ω) Max.	RATED CURRENT (A) Max.	
					Idc 1	Idc 2
11	DBS187CNP-120M	120	12.0 \pm 20%	32.5	10.00	4.10
12	DBS187CNP-150M	150	15.0 \pm 20%	36.0	9.00	3.90
13	DBS187CNP-180M	180	18.0 \pm 20%	41.0	8.00	3.70
14	DBS187CNP-220M	220	22.0 \pm 20%	47.0	7.50	3.20
15	DBS187CNP-270M	270	27.0 \pm 20%	58.0	7.00	2.90
16	DBS187CNP-330M	330	33.0 \pm 20%	66.0	6.00	2.80
17	DBS187CNP-390M	390	39.0 \pm 20%	82.0	5.50	2.50
18	DBS187CNP-470M	470	47.0 \pm 20%	86.0	5.00	2.20
19	DBS187CNP-560M	560	56.0 \pm 20%	126.0	4.50	1.90
20	DBS187CNP-680M	680	68.0 \pm 20%	130.0	4.00	1.80
21	DBS187CNP-820M	820	82.0 \pm 20%	175.0	3.50	1.55
22	DBS187CNP-101M	101	100 \pm 20%	190.0	3.00	1.50
23	DBS187CNP-121M	121	120 \pm 20%	220.0	2.80	1.35
24	DBS187CNP-151M	151	150 \pm 20%	280.0	2.60	1.20
25	DBS187CNP-181M	181	180 \pm 20%	320.0	2.40	1.10
26	DBS187CNP-221M	221	220 \pm 20%	380.0	2.20	0.95
27	DBS187CNP-271M	271	270 \pm 20%	510.0	2.00	0.80
28	DBS187CNP-331M	331	330 \pm 20%	580.0	1.80	0.75
29	DBS187CNP-391M	391	390 \pm 20%	760.0	1.60	0.65
30	DBS187CNP-471M	471	470 \pm 20%	850.0	1.40	0.60
31	DBS187CNP-561M	561	560 \pm 20%	1000.0	1.30	0.55
32	DBS187CNP-681M	681	680 \pm 20%	1200.0	1.20	0.50
33	DBS187CNP-821M	821	820 \pm 20%	1500.0	1.10	0.45
34	DBS187CNP-102M	102	1000 \pm 20%	1700.0	1.00	0.40

* TESTING INSTRUMENT

INDUCTANCE: HP 4284A OR EQUIVALENT.

D.C.R.: HP 34420A MICRO OHM METER OR EQUIVALENT.

RATED CURRENT: HP 4284A, HP 42841A, HP 34420A, HP 3633A OR EQUIVALENT.

* TESTING CONDITIONS OF INDUCTANCE: at 100 kHz / 1.0V

* I_{dc} 1: THE CURRENT WHEN THE INDUCTANCE DECREASES TO 90% OF INITIAL VALUE (T_a=25°C).

* I_{dc} 2: THE CURRENT WHEN THE TEMPERATURE OF COIL IS INCREASED BY 40°C (T_a= 25°C).

* THE RATED CURRENT INDICATES THE SMALLER ONE BETWEEN I_{dc}1 AND I_{dc}2.



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4. GENERAL CHARACTERISTICS

* STANDARD TESTING CONDITIONS:

UNLESS OTHERWISE SPECIFIED, THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MEASUREMENTS AND TESTS ARE AS FOLLOWS: AMBIENT TEMPERATURE: 15°C TO 35°C. RELATIVE HUMIDITY: 25% TO 85%.

AIR PRESSURE: 86kPa TO 106kPa.

IF THERE IS ANY DOUBT ABOUT THE RESULTS, MEASUREMENT SHALL BE MADE WITHIN THE FOLLOWING LIMITS: AMBIENT TEMPERATURE: 20°C ± 1°C. RELATIVE HUMIDITY: 63% TO 67%. AIR PRESSURE: 86kPa TO 106kPa.

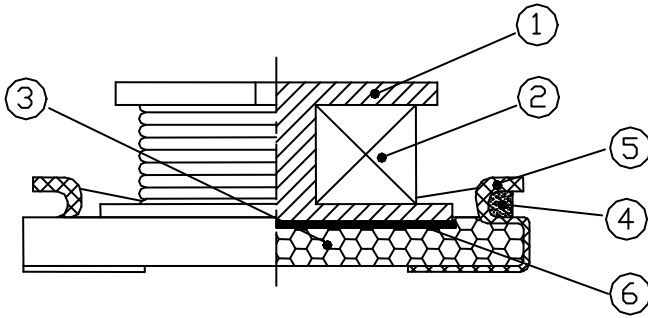
No.	ITEMS	CONDITIONS	SPECIFICATION
1	OPERATION TEMPERATURE STORAGE TEMPERATURE		-40 ~ +85°C (INCLUDING COIL TEMPERATURE RISE) -40 ~ +85°C
2	TEMPERATURE COEFFICIENT	-40 ~ +85°C	0 ~ 2000 ppm/°C
3	FIXING STRENGTH	SAMPLE IS PUSHED IN THREE DIRECTIONS OF X, Y AND Z WITH FORCE OF 10N FOR 60 ± 5 SECONDS. AFTER LEAD FREE SOLDERING BETWEEN COPPER PLATE AND ELECTRODES.	NO ELECTRODE DETACHMENT.
4	RESISTANCE TO SOLDERING HEAT TEST	PLEASE REFER TO THE ATTACHMENT STD-002NP.	NO MECHANICAL BREAKAGE. DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ± 5.0%
5	SOLDER ABILITY TEST	IMMERSE THE ELECTRODE IN FLUX FOR 5 SECONDS. THEN DIP THE ELECTRODE INTO A SOLDERING BATH OF 245 ± 5°C FOR 2 ± 0.5 SECONDS.	OVER 90% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMLY.
6	VIBRATION TEST	AMPLITUDE: 1.5mm P-P FREQUENCY: 10 ~ 55 ~ 10Hz (1 MINUTE PER CYCLE) DURATION: 2 HOURS IN EACH OF X,Y,Z AXIS. (TOTAL 6 HOURS)	DEVIATION RELATIVE TO INITIAL VALUE:
7	SHOCK TEST	PEAK ACCELERATION: 981m/s ² DURATION OF PULSE: 10ms SHOCK TIMES: 3 TIMES IN EACH OF X, Y, Z AXIS. (TOTAL 9 TIMES)	L: WITHIN ± 2.0%
8	HUMIDITY TEST	TEMPERATURE: 40°C ± 2°C HUMIDITY: 90% ~ 95%RH DURATION: 96 ± 4 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L: WITHIN ± 5.0%



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5. CONSTRUCTION



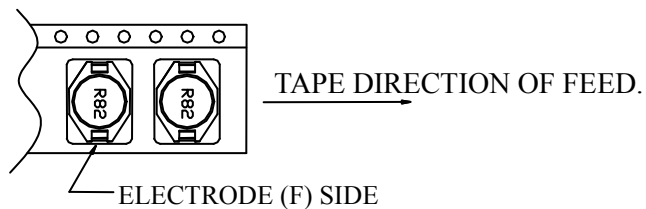
No.	PARTS	MATERIAL
①	CORE	FERRITE CORE CHV22 OR EQUIVALENT
	CORE COATING	EPOXY (6080A/B)
②	WIRE	POLYURETHANE ENAMELLED COPPER WIRE
③	BASE	DIALLYL PHTHALATE
④	SOLDER	Sn-Cu-Ni
⑤	ELECTRODE	COPPER TINNED
⑥	ADHESIVE	EPOXY RESIN (XNR3614)

6. PACKING

PACKAGE TO BE ACCORDING TO PACKAGE SPECIFICATIONS (TICK THE RELEVANT “√”)

* KB -CTR024

* ENCLOSING CONDITION OF COILS.(IN THE CASE OF KB -CTR024)



* RECOMMENDED REFLOW CONDITION BASES ON STD-001NP.