Data Sheet

Customer:	
Product:	**Shielded SMD Power Inductor – SCDB Series**
Sizes.:	**2D12/2D15/2D18**
Issued Date:	**10-Apr-25**
Edition:	**REV.B**

RoHS Compliant

HONG KONG HELISTO INDUSTRIAL LIMITED
香港海利斯特实业有限公司

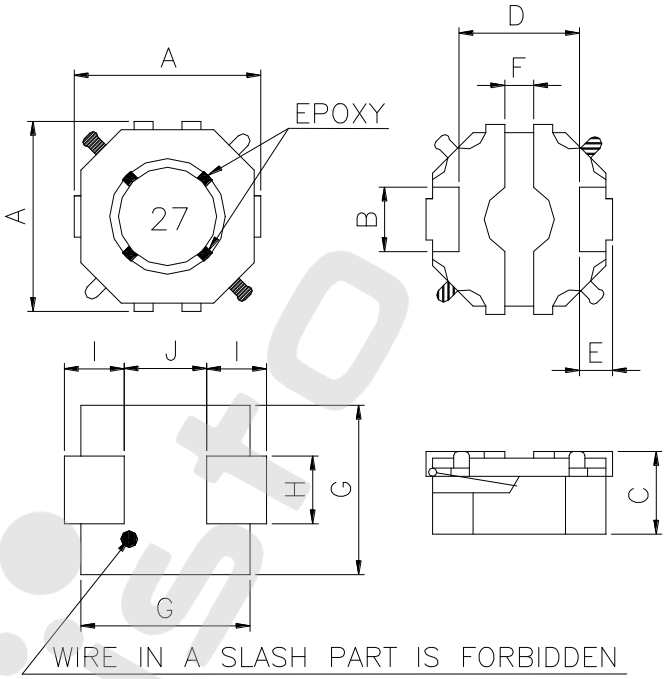
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Shielded SMD Power Inductor





Features

- New designed terminal for low cost
- Low profile and high current
- Magnetically shielded construction
- Ideal for digital equipment and hand phone of new generation.

Applications

- DSD, DVC, PDA Products
- Hand Phone Of New Generation
- Hard Disk Drives

Characteristics

- Saturation Rated Current: The current when the inductance becomes 30% lower than its initial value. (Ta=20°C)
- Temperature Rise Current: The current when temperature of coil increases up to Max. Δt=40°C. (Ta=20°C)
- Operating temperature range: -40～125°C
- Storage Temperature: 5℃～25℃ ;
  Humidity: 35%～65%
- Shelf life: 1 years Max

Dimensions

Unit: mm

Type	A	B	C max.	D	E	F	G	H	I	J
SCDB2D12	3.0±0.2	1.0	1.2	2.0	0.5	0.5	3.2	1.2	1.1	1.8
SCDB2D15	3.0±0.2	1.0	1.5	2.0	0.5	0.5	3.2	1.2	1.1	1.8
SCDB2D18	3.0±0.2	1.0	1.8	2.0	0.5	0.5	3.2	1.2	1.1	1.8

Inductance and rated current ranges

- SCDB2D12 1.2～22μH 0.85～0.22A
- SCDB2D15 2.2～33μH 1.00～0.25A
- SCDB2D18 2.2～47μH 1.10～0.23A
- Test equipment:
  L: HP4284A Precision LCR meter
  DCR: Milli-ohm meter

Product Identification

SCDB	2D12	M	T	101
Product Type	Dimensions	Inductor Tolerance	Packaging Style	Inductance
	2D12: 3x3x1.2 2D15: 3x3x1.5 2D18: 3x3x1.8	M: ±20% N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

■Electrical Characteristics

SCDB2D12 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
SCDB2D12□T1R2	1.2	N	100KHz, 0.1V	0.117	0.85	0.70	1.05
SCDB2D12□T2R2	2.2	N	100KHz, 0.1V	0.182	0.70	0.60	0.90
SCDB2D12□T3R3	3.3	N	100KHz, 0.1V	0.260	0.60	0.50	0.82
SCDB2D12□T4R7	4.7	N	100KHz, 0.1V	0.312	0.50	0.40	0.72
SCDB2D12□T5R6	5.6	N	100KHz, 0.1V	0.442	0.46	0.35	0.67
SCDB2D12□T6R8	6.8	N	100KHz, 0.1V	0.520	0.43	0.30	0.62
SCDB2D12□T8R2	8.2	N	100KHz, 0.1V	0.560	0.38	0.28	0.58
SCDB2D12□T100	10	M	100KHz, 0.1V	0.780	0.33	0.25	0.55
SCDB2D12□T220	22	M	100KHz, 0.1V	1.650	0.22	-	-

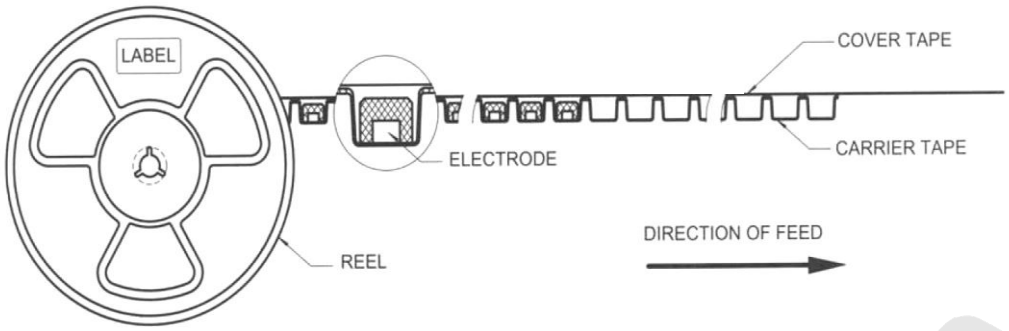
SCDB2D15 Type

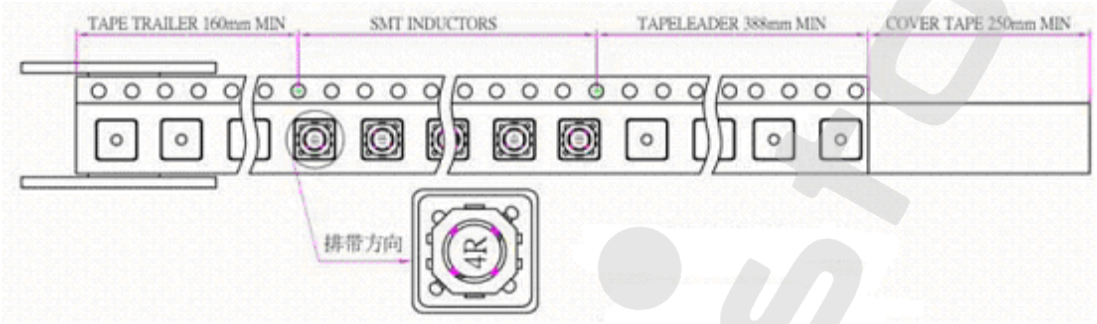
Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
SCDB2D15□T2R2	2.2	N	100KHz, 0.1V	0.150	1.00	0.80	1.00
SCDB2D15□T3R3	3.3	N	100KHz, 0.1V	0.234	0.90	0.70	0.90
SCDB2D15□T4R7	4.7	N	100KHz, 0.1V	0.338	0.80	0.60	0.85
SCDB2D15□T5R6	5.6	N	100KHz, 0.1V	0.364	0.70	0.55	0.80
SCDB2D15□T6R8	6.8	N	100KHz, 0.1V	0.416	0.60	0.52	0.77
SCDB2D15□T8R2	8.2	N	100KHz, 0.1V	0.572	0.55	0.48	0.72
SCDB2D15□T100	10	M	100KHz, 0.1V	0.624	0.50	0.45	0.70
SCDB2D15□T120	12	M	100KHz, 0.1V	0.702	0.45	0.40	0.65
SCDB2D15□T150	15	M	100KHz, 0.1V	0.949	0.40	0.35	0.50
SCDB2D15□T180	18	M	100KHz, 0.1V	1.090	0.35	0.30	0.40
SCDB2D15□T220	22	M	100KHz, 0.1V	1.250	0.30	0.25	0.30
SCDB2D15□T330	33	M	100KHz, 0.1V	2.200	0.25	-	0.25

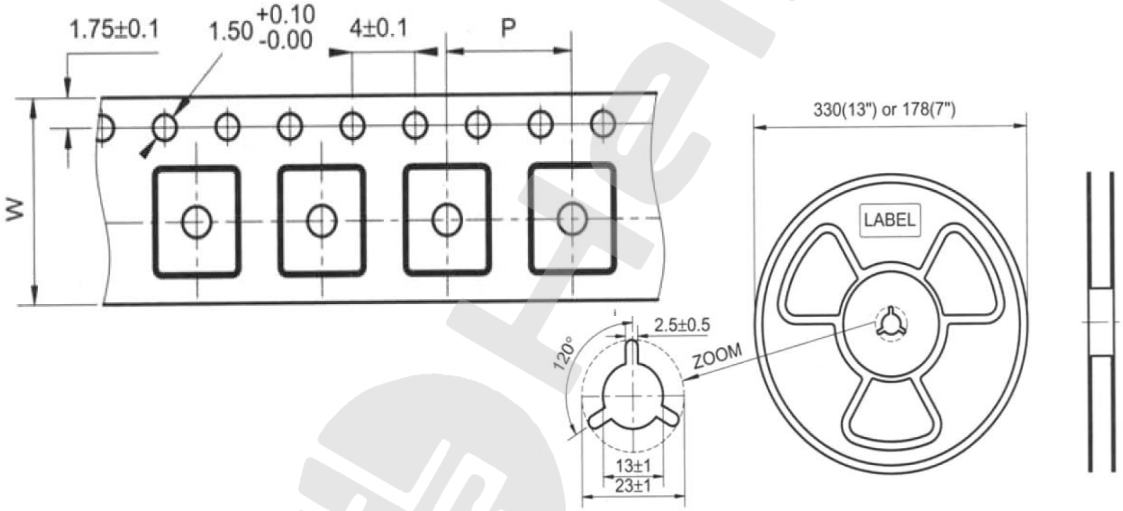
SCDB2D18 Type

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
SCDB2D18□T2R2	2.2	N	100KHz, 0.1V	0.117	1.10	0.90	1.10
SCDB2D18□T3R3	3.3	N	100KHz, 0.1V	0.143	1.00	0.80	1.00
SCDB2D18□T4R7	4.7	N	100KHz, 0.1V	0.221	0.80	0.70	0.90
SCDB2D18□T5R6	5.6	N	100KHz, 0.1V	0.247	0.75	0.60	0.85
SCDB2D18□T6R8	6.8	N	100KHz, 0.1V	0.312	0.70	0.55	0.82
SCDB2D18□T8R2	8.2	N	100KHz, 0.1V	0.351	0.60	0.50	0.78
SCDB2D18□T100	10	M	100KHz, 0.1V	0.468	0.55	0.48	0.75
SCDB2D18□T120	12	M	100KHz, 0.1V	0.533	0.50	0.45	0.65
SCDB2D18□T150	15	M	100KHz, 0.1V	0.598	0.45	0.40	0.55
SCDB2D18□T180	18	M	100KHz, 0.1V	0.715	0.40	0.33	0.50
SCDB2D18□220	22	M	100KHz, 0.1V	0.975	0.38	0.30	0.45
SCDB2D18□T270	27	M	100KHz, 0.1V	1.105	0.33	0.25	0.40
SCDB2D18□T330	33	M	100KHz, 0.1V	1.222	0.30	0.23	0.33
SCDB2D18□T390	39	M	100KHz, 0.1V	1.625	0.25	0.20	0.28
SCDB2D18□T470	47	M	100KHz, 0.1V	1.820	0.23	0.18	0.25

■Tape and Reel specifications







Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SCDB2D12	12	8	4000
SCDB2D15	12	8	4000
SCDB2D18	12	8	3500

■SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: 15~28℃; Humidity: <80% relative humidity. Recommended product should be used within one year from the time of delivery.

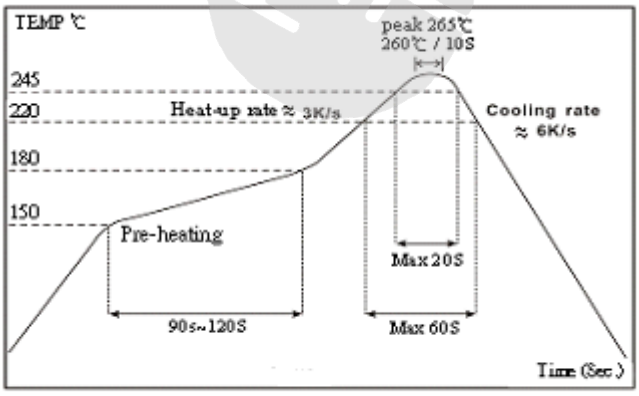
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. △L/L≦10%	Temperature 85±2℃, Time: 48±2 hours, Tested after 1hour at room temperature.
Low temperature Storage test		Temperature -25±2℃, Time: 48±2 hours, Tested after 1hour at room temperature.
Humidity test		Temperature 40±2℃, 90~95% relative humidity Time: 96±2 hours Tested after 1hour at room temperature.
Thermal shock test		First -25℃ 30minutes then 25℃ 10 minutes last 85℃ 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5℃ for 3 seconds.
Resistance to Soldering Heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150℃. Immersing to 260±5℃ for 10 seconds.
Vibration test	No case deformation or change in appearance. △L/L≦10%	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance		Drop down with 981m/s^2(100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

The condition of reflow (recommendation):



REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version B	Apr 10,2025		-Add Storage conditions and Shelf life.