

1. Features of SC2515 Series :

- Low profile 4.0 mm max. height SMD power inductor.
- Low core loss with no thermal aging.
- Ideal for DC to DC converter, VRM & High density board design.
- Tight DCR tolerance for accurate current sensing.
- Operating frequency of up to 3.0 MHz.
- Inductance Range: 0.33uH to 5.0 uH , custom values are welcomed.
- Operating Temperature Range: -55°C to + 150°C.
- T & R Qty's: 1300 pcs , 13" Reel with plastic tape 16mm wide and 12mm pocket spacing.
- RoHs & HF Compliant.

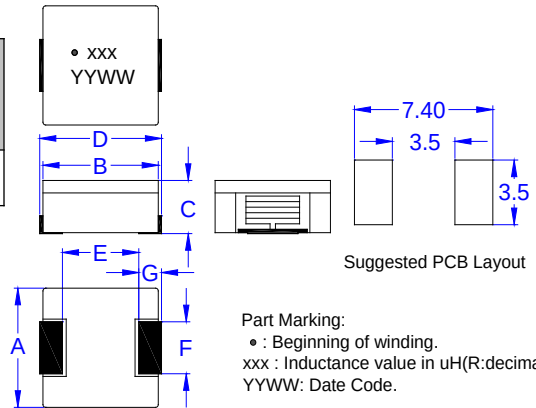


2. Electrical Characteristics of SC2515 Series:

ITG Part Number	OCL ¹ (uH) ± 20%	DCR ±7% (mΩ) @25°C	Isat1 ² (Amp.) @25°C	Irms ³ (A) @25°C	L@Irms (uH) Typ.	I _{max} ⁴ (A) @25°C	L@I _{max} (uH) Typ.
SC2515-R33MHF	0.33	1.88	38.00	23.00	0.28	40.00	0.23
SC2515-R47MHF	0.47	1.88	25.00	23.00	0.32	30.00	0.29
SC2515-R68MHF	0.68	2.42	19.00	20.00	0.45	27.40	0.40
SC2515-1R0MHF	1.00	4.00	17.00	19.00	0.66	25.00	0.57
SC2515-1R5MHF	1.50	6.00	12.50	13.00	1.01	20.00	0.81
SC2515-2R3MHF	2.30	12.00	10.00	10.00	1.66	14.00	1.36
SC2515-3R0MHF	3.00	13.40	9.00	9.00	2.15	13.50	1.75
SC2515-3R3MHF	3.30	14.80	9.50	6.00	2.80	9.00	2.50
SC2515-5R0MHF	5.00	34.30	7.30	5.30	4.10	7.30	3.70

3. Mechanical Dimension of SC2515 Series (Unit:mm):

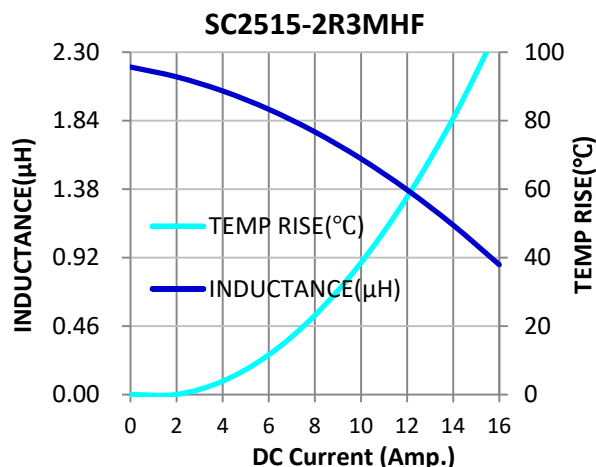
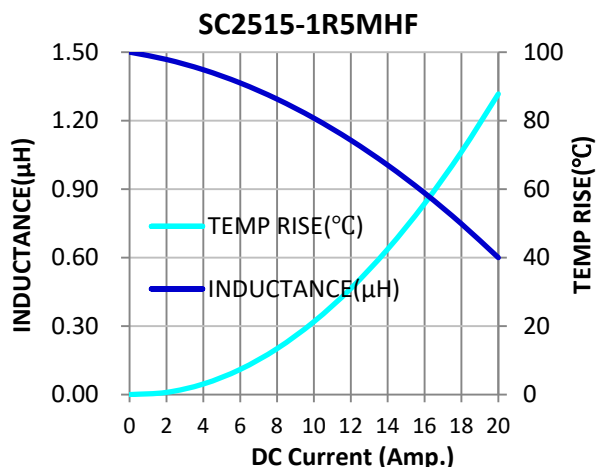
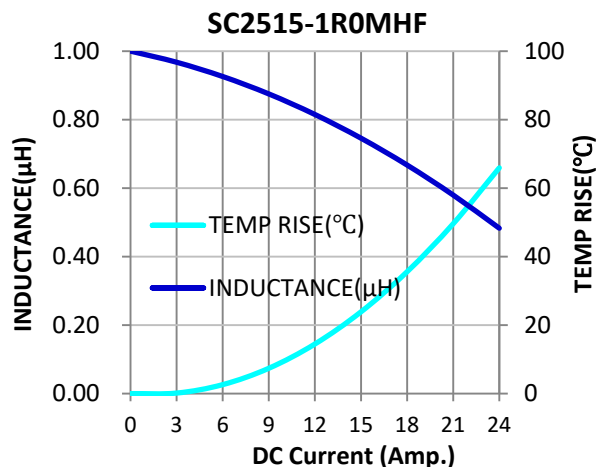
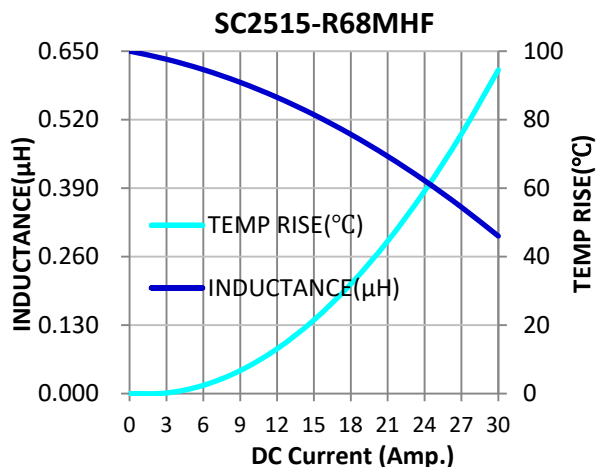
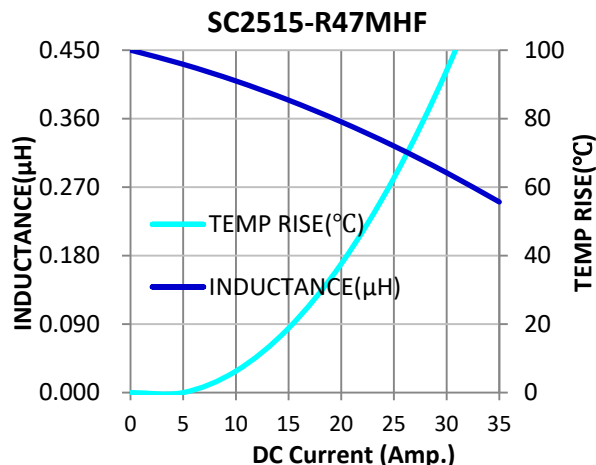
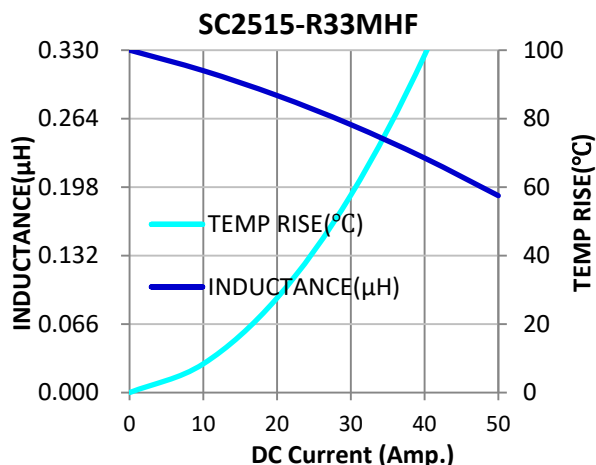
A	B	C	D	E	F	G
±0.30	±0.30	(Max.)	(Max.)	(Ref.)	(Ref.)	(Ref.)
6.50	6.50	4.00	7.80	4.50	2.80	1.30



Notes:

- 1>. Test condition: 300KHz, 0.25Vrms, 0 Amp. at 25°C.
- 2>. Isat1: DC current that will cause inductance to drops approximately by 30% (typical).
- 3>. Irms: DC current rating at 40°C temperature raise (typical).
- 4>. I_{max}: DC current rating with maximum of 100°C temperature rise.
- 5>. L@Isat , L@Irms & L@I_{max} are measured at 300KHz, 0.25V.

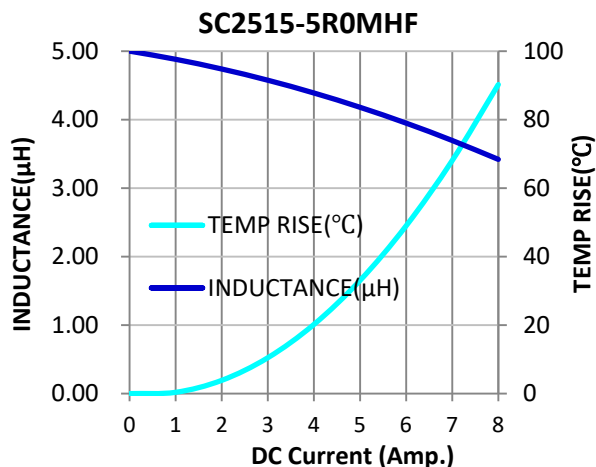
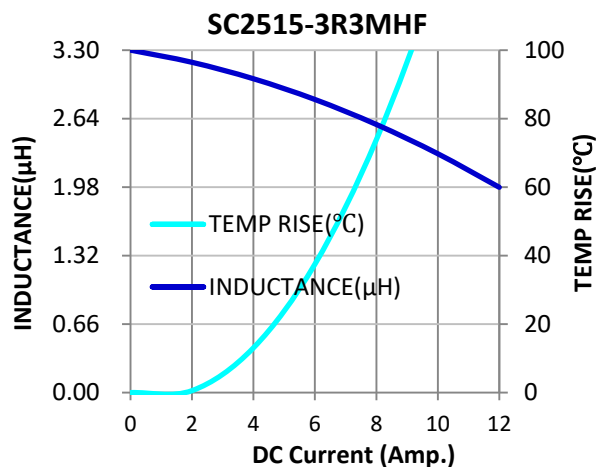
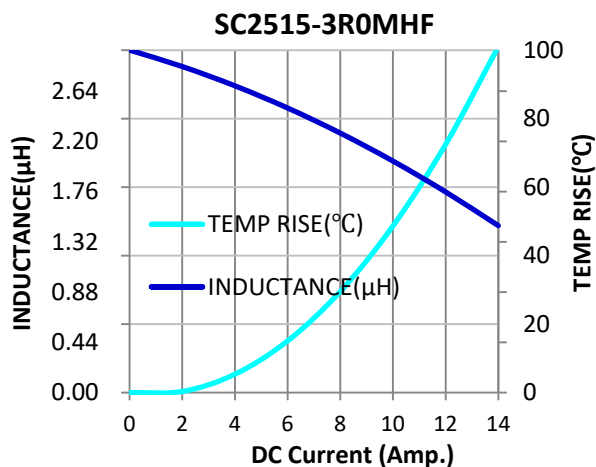
4. Inductance vs. Temperature Rise Characteristics of SC2515 Series:



SC2515 Series

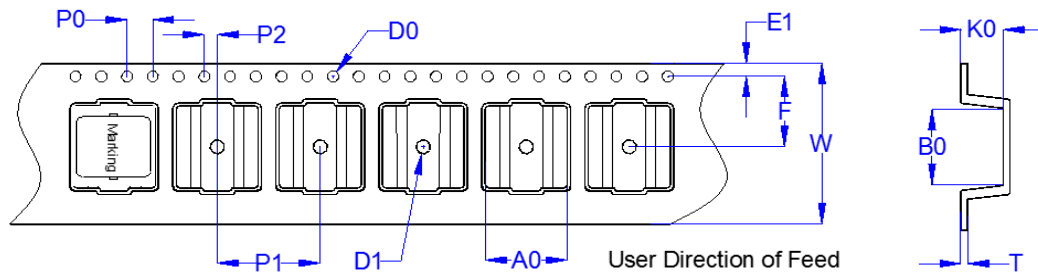


4. Inductance vs. Temperature Rise Characteristics of SC2515 Series:



5. PACKAGE SPECIFICATION.(UNIT:mm):

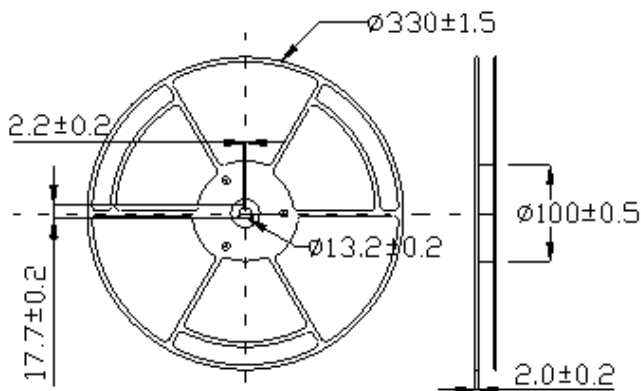
(1).ENCAPSULATION MODE:



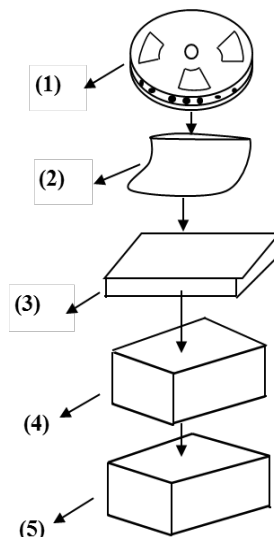
(2).DIMENSION(mm):

W	A0	B0	K0	P1	P0	P2	D0	D1	F	E1	T
16+0.3/-0.1	6.90±0.10	6.90±0.10	4.10±0.10	12.0±0.10	4.0±0.10	2.0±0.10	1.5+0.10/-0	1.5+0.10/-0	7.5±0.10	1.75±0.10	0.35±0.05

(3).REEL SIZE:



(4).PACKAGE MODE:



(5).PACKAGING LIST:

No.	Packing Part	Dimension (mm)	Material	Quantity
1	Reel	330	Plastic	1300Pcs / Reel
2	Bag	450 X 360 X 0.075	Plastic	1Reel / Bag
3	Small Box	340 X 335 X 45	Paper	2Bag / Small Box
4	Middle Box	356 X 350 X 226	Paper	4Small Boxes / Middle Box
5	Outer Box	378 X 362 X 252	Paper	1Middle Box / Outer Box

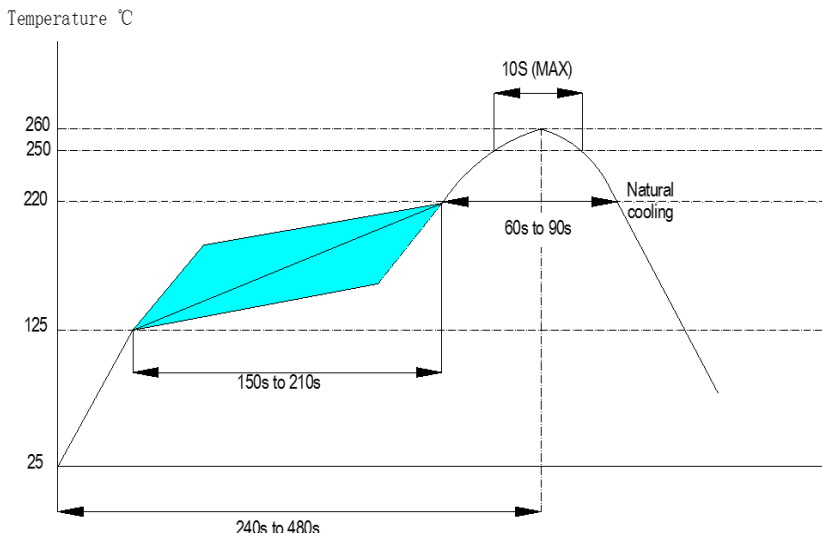
(6).WEIGHT: N.W: 0.73/pcs TOTAL 7.59Kg(APPROX), G.W: TOTAL 12.39Kg(APPROX).

(7).Storage conditions: -40°C~85°C ,75%RH (Max.).

6.RELIABILITY TEST:

TEST ITEMS	SPECIFICATIONS	TEST METHOD AND REMARKS
Solderability	The electrodes shall be at least 95% covered with new solder coating	According to J-STD-002 Method D category 3 1. Soldering temperature: 260±5℃ 2. Solder: 99.3%Sn/0.7%Cu 3. Flux:Rosin 4. Immersion time: 5 ± 1Sec
Resistance to Soldering Heat	1. Appearance : No damage 2. Inductance change: within ±10% of initial value	According to MIL-STD-202 Method 210 1. Preheat temperature:150℃ 2. Preheat time:1min 3. Solder temperature:260±5℃ 4. Dipping time:10±1Sec 5. Measured at room temperature after placing for 24hours
Humidity resistance	1. Appearance: No damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-3 Method Ca 1. Temp. : 40±2℃ 2. Humidity: 93+2/-3 % RH 3. Test time: 500 ± 2H 4. The component should be stabilized at normal condition for 24 Hours before test
High temperature resistance	1. Appearance: No damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-2 Method B(Bd) 1. Temperature: 85 ± 3℃ 2. Test time: 500 +24H / -0H 3. The component should be stabilized at normal condition for 24hours before test
Low Temperature resistance	1. Appearance: No damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-1 Method A(Ad) 1. Temperature: -40 ± 3℃ 2. Test time: 500 +24H / -0H 3. The component should be stabilized at normal condition for 24hours before test
Temperature cycles	1. Appearance: No damage 2. All Electrical and mechanical parameters within tolerance	According to IEC68-2-14 Method N(Nb) 1. Low-temp: -40±3℃ duration 30min 2. room -temp: 25±2℃ duration 3H 3. High-temp: 85±3℃ duration 30min 4. room-temp: 25±2℃ duration 3H 5. Number of cycle: 10 cycles 6. The component should be stabilized at normal condition for 24hours before test

Soldering Reflow Chart

Stage	Precaution	Recommended temperature profile
Reflow soldering	Temperature profile can be referenced after confirming of adhesion , temperature of resistance to soldering heat , component size , soldering etc. sufficient . Note: please refer to the latest IPC/JEDEC J-STD-020: "Moisture/Reflow Sensitivity Classification for Nonhermetic Solid State Surface Mount Devices"	 Temperature °C 260 250 220 125 25 10S (MAX) Natural cooling 60s to 90s 150s to 210s 240s to 480s