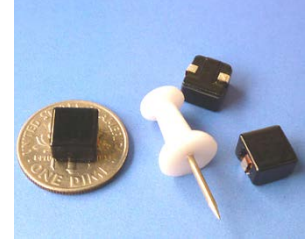


1. Features of SC3018S Series:

- Low profile 5.0mm / 5.1mm max. height SMD power inductor.
- Foot print 7.90 x 7.60 mm Max.
- Ideal for DC to DC converter, VRM & high density Board Design.
- Low leakage flux , Shielded inductor design .
- Operating up to 3 MHz application.
- Suitable for IR reflow and wave solder process.
- Operating temperature range of -40° C to +150° C.
- T & R Qty's: 1000pcs, 13" Reel. RoHS & HF compliant.

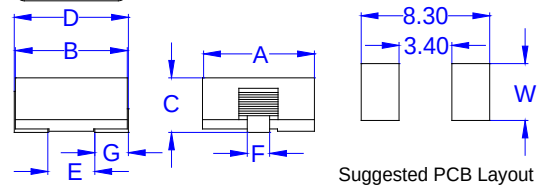
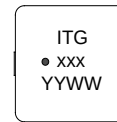


2. Electrical Characteristics of SC3018S Series:

ITG Part Number	OCL ¹ (uH) ± 20%	DCR (mΩ) ± 6%	Isat ² (A) @25°C	L@Isat (uH) Typ.	Irms ³ (A) @25°C	L@Irms (uH) Typ.	Dim. C mm Max.	Size Code
SC3018S-R40MHF	0.40	1.80	35.00	0.36	21.00	0.38	5.10	S1
SC3018S-R68MHF	0.68	2.80	25.00	0.59	18.00	0.63	5.10	S2
SC3018S-1R0MHF	1.00	4.20	22.00	0.81	15.50	0.88	5.10	S3
SC3018S-1R3MHF	1.30	4.20	19.00	1.03	15.50	1.12	5.10	S3
SC3018S-1R5MHF	1.50	5.90	18.00	1.34	13.50	1.40	5.10	S3
SC3018S-2R2MHF	2.20	8.30	14.00	1.80	10.00	1.95	5.10	S3
SC3018S-3R3MHF	3.30	12.50	13.00	2.60	11.00	2.70	5.00	S3
SC3018S-4R7MHF	4.70	20.00	10.00	3.70	9.00	4.00	5.00	S3
SC3018S-6R8MHF	6.80	22.50	8.00	5.40	6.50	5.50	5.00	S3

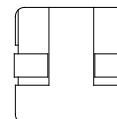
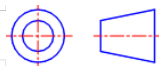
3. Mechanical Dimension of SC3018S Series:

Size Code	A ±	B ±	C	D	E	F	G	W
	0.25	0.25	Max.	Max.	Nom.	Ref.	Min.	Nom.
S1	7.35	7.10	See tabel above	7.90	3.80	2.80	1.70	3.40
S2	7.35	7.10		7.90	3.80	2.20	1.70	2.80
S3	7.35	7.10		7.90	3.80	1.60	1.70	2.30



Suggested PCB Layout

Third Angle Projection:

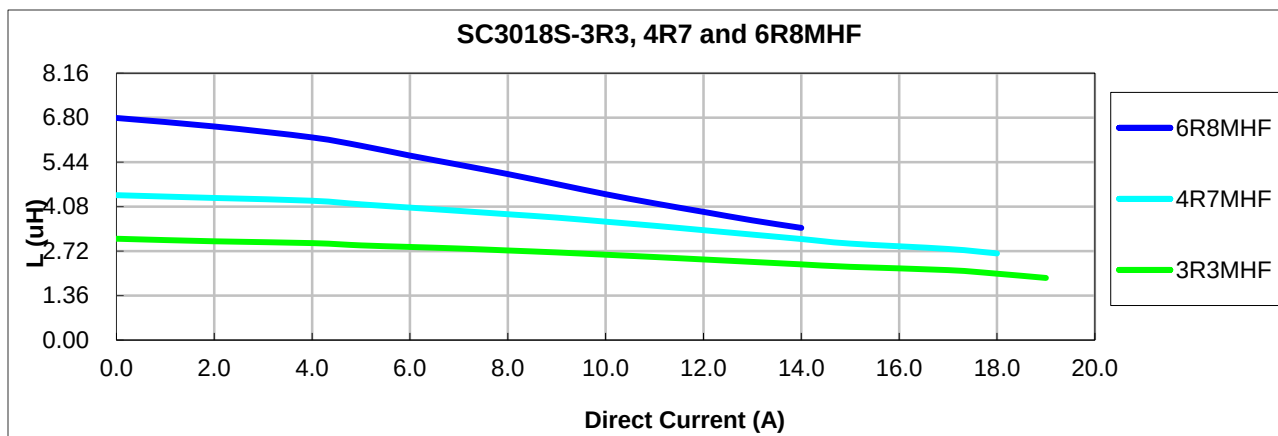
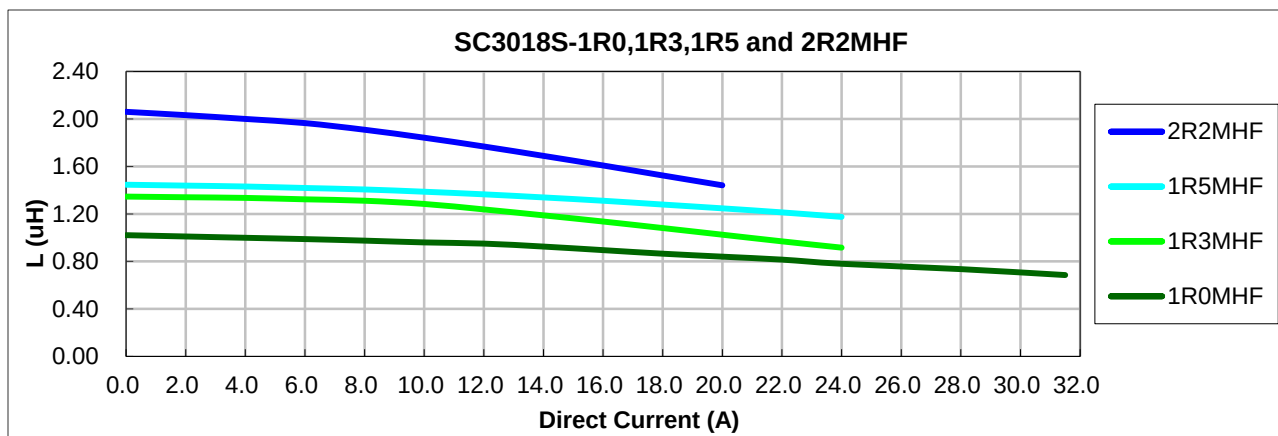
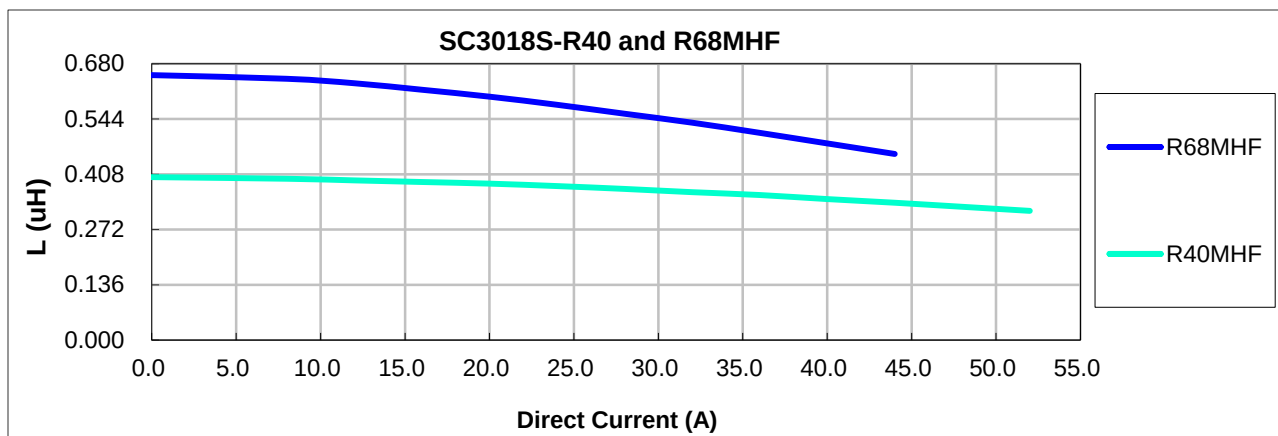


Part Marking:
ITG : Company Name.
"●" : Beginning of winding.
xxx : Inductance value in uH(R:decimal point).
YYWW : Date Code.

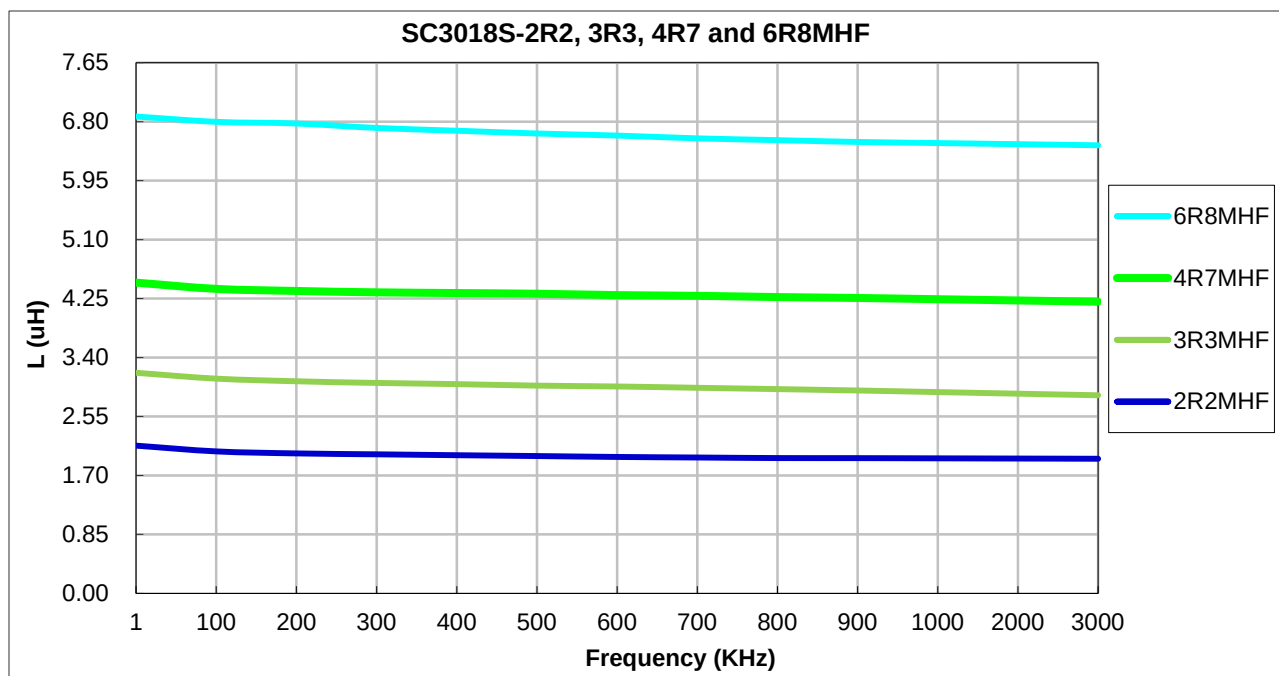
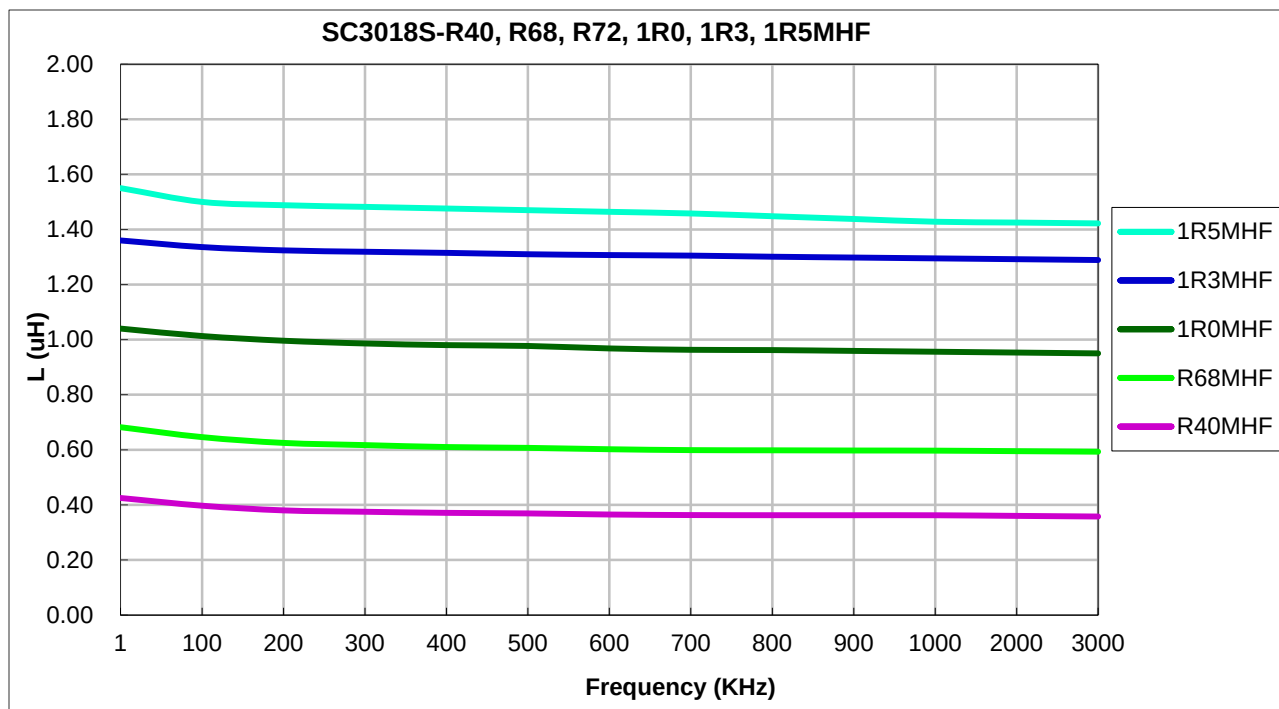
Notes:

1. Open Circuit Inductance (OCL) test condition: 100KHz , 0.10Vrms, 0Adc at 25°C.
2. Isat: DC current that will cause inductance to drop approximately by 20% (Typical).
3. Irms: DC current rating at 40°C temperature rise without core loss (Typical).

4. Inductance Characteristics of SC3018S Series (Inductance vs. Current):

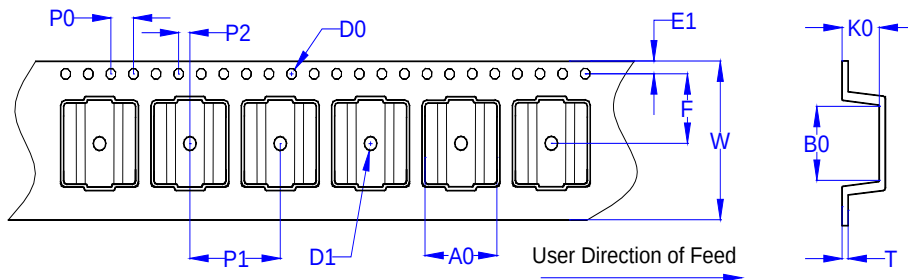


5. Inductance Characteristics of SC3018S Series (Inductance vs. Frequency):



6. PACKAGE SPECIFICATION.(UNIT:mm):

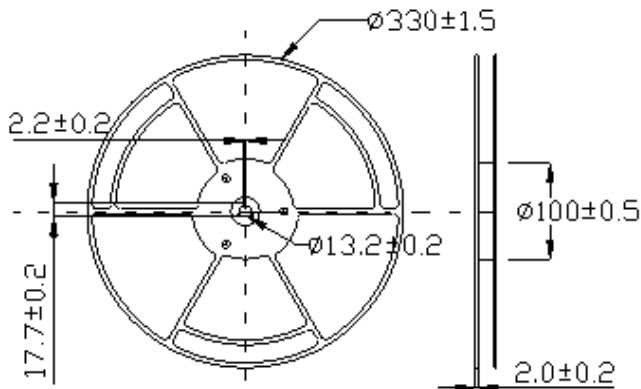
(1).ENCAPSULATION MODE:



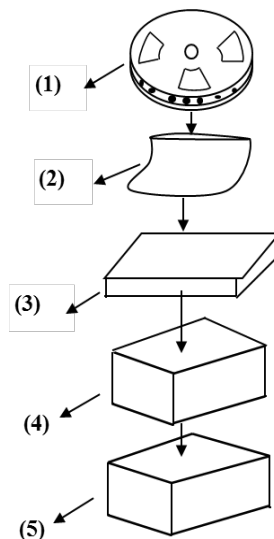
(2).DIMENSION(mm):

W	A0	B0	K0	P1	P0	P2	D0	D1	F	E1	T
12.0+0.3/-0.1	7.7±0.10	7.6±0.10	5.20±0.10	12.0±0.10	4.00±0.10	2.00±0.10	1.50+0.10/-0	1.50+0.10/-0	7.5±0.10	1.75±0.10	0.40±0.05

(3).REEL SIZE:



(4).PACKAGE MODE:



(5).PACKAGING LIST:

No.	Packing Part	Dimension (mm)	Material	Quantity
1	Reel	330	Plastic	1000Pcs/Reel
2	Bag	450x360x0.075	Plastic	1Reel/Bag
3	Small Box	340X335X45	Paper	2Bag/Small Box
4	Middle Box	356X350X226	Paper	4Small Boxes/Middle Box
5	Outer Box	378X362X252	Paper	1Middle Box/Outer Box

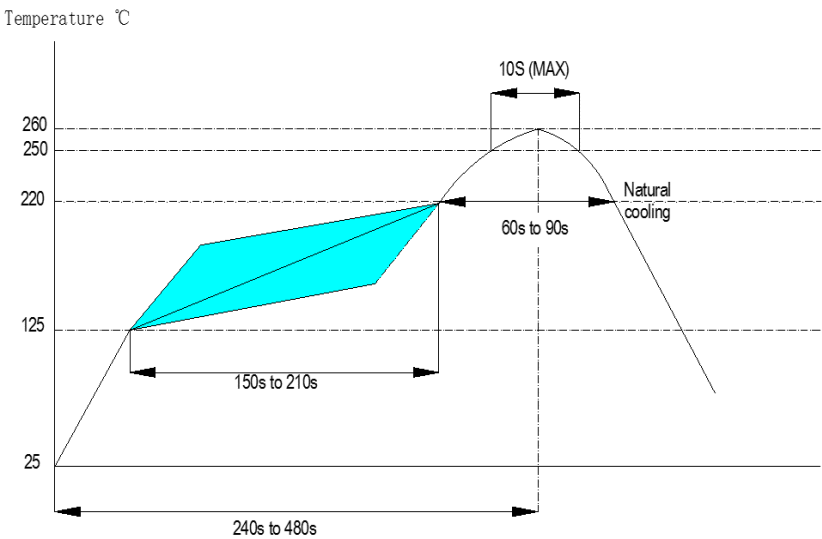
(6).WEIGHT: N.W: 1.23 g/pcs (APPROX), TOTAL 9.84 Kg(APPROX),G.W:TOTAL 15.20Kg (APPROX).

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

7.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 210F 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) or MIL-STD-202 Method 108A 1. Temperature: 125 ± 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) or JESD22-A119A 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) or JESD22-A104C 1. Low-temp: -40±3℃ duration 30min 2. room -temp: 25±2℃ duration 3H 3. High-temp: 125±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) 60s to 90s Natural cooling 150s to 210s 240s to 480s