



### FEATURES

- Magnetic shielded structure
- Low DCR and high efficiency
- Low profile and small size
- High reliability
- AEC-Q200 qualified

### APPLICATIONS

- DC-DC converters and power suppliers
- LCD TV's, Blu-ray and gaming consoles
- Tablets, notebooks, servers and printers
- Smart phones, GPS, set top box and base stations
- LED lighting
- Automotive

### ELECTRICAL SPECIFICATIONS

PART NO.	INDUCTANCE (μH)	R <sub>dc</sub> (Ω) ±30%	SATURATION CURRENT <sup>5</sup> (A)	RMS CURRENT <sup>4</sup> (A)	SRF MHZ (REF)
TYS30101R0N-10	1.0	0.065	1.40	1.45	180
TYS30101R5N-10	1.5	0.080	1.27	1.30	120
TYS30102R2N-10	2.2	0.110	1.15	1.09	100
TYS30103R3N-10	3.3	0.145	0.97	0.96	74
TYS30104R7M-10	4.7	0.225	0.75	0.77	59
TYS30106R8M-10	6.8	0.305	0.55	0.66	42
TYS3010100M-10	10	0.400	0.55	0.58	39
TYS3010150M-10	15	0.610	0.42	0.47	30
TYS3010220M-10	22	0.930	0.35	0.38	28
TYS3010330M-10	33	1.550	0.29	0.30	18
TYS3010470M-10	47	1.950	0.22	0.26	18

1 Electrical specifications at 20°C.

2 Tolerance: M: ±20%, N: ±30%

3 Inductance tested at 100 KHz, 1V

4 RMS Current is defined based on temperature rise up to or less than 40°C from 20°C ambient.

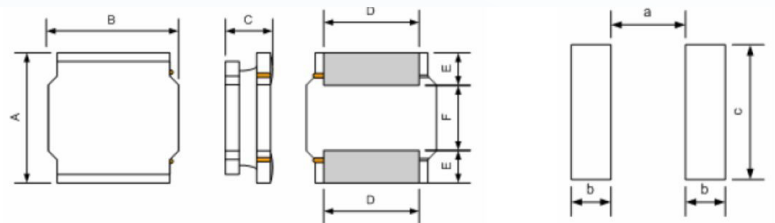
5 Saturation Current is the DC current at which the inductance drops approximate 30% from its value without current..

6 Operate temperature range: -40°C ~ +125°C (including self-temperature rise)

7 Storage temperature range (packaging conditions): -10°C~+40°C and RH 70%(MAX.)

### SHAPES AND DIMENSIONS

Unit: mm

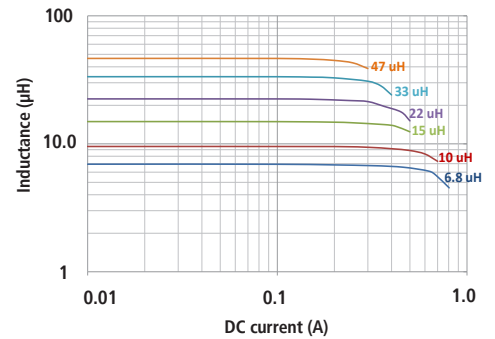
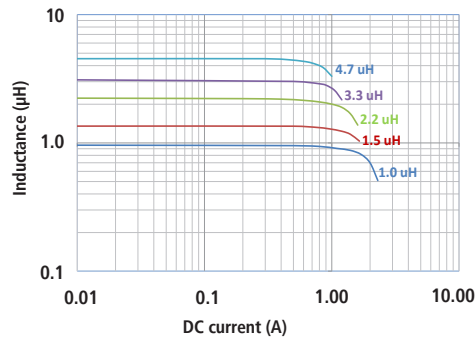


A	B	C	D	E	F	a	b	c
3.0±0.2	3.0±0.2	1.0 Max.	2.5±0.2	0.75±0.2	1.5±0.2	1.5 Typ.	0.8 Typ.	2.7 Typ.

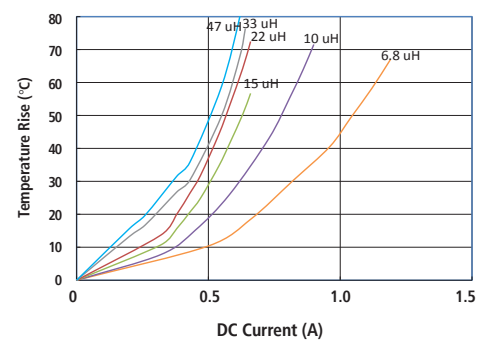
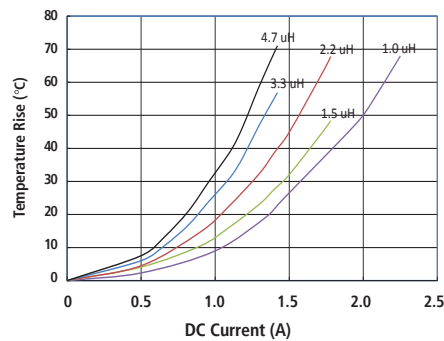
USA: +1.866.928.8181  
Europe: +49.0.8031.2460.0  
Asia: +86.755.2714.1166

### TYPICAL ELECTRICAL CHARACTERISTICS

Typical L vs Current



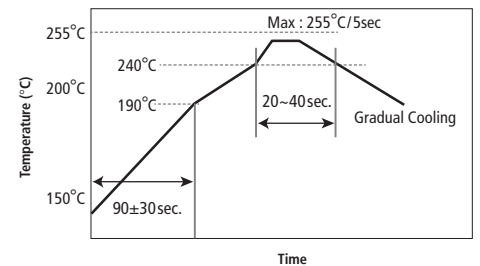
Characters of Temperature Rise



### PACKAGING INFORMATION

- Standard Tape and Reel Quantity (PCS) = 2000
- Reel Size = 7 inches

Temperature Profile of Reflow Soldering



### ORDERING INFORMATION

#### PART NUMBER EXAMPLE

T	Y	S	3	0	1	0	4	R	7	M	-	1	0
Product series code			Part size code			Inductance value code (i.e. 4R7: 4.7µH)			Tolerance % (i.e. M: ±20% • N:±30%)		PB free code (i.e. 10: PB free)		

SIP-DS-TYS 3010 0413

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