



**THE DATASHEET OF  
TYS252012L1R0N-10**





### 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

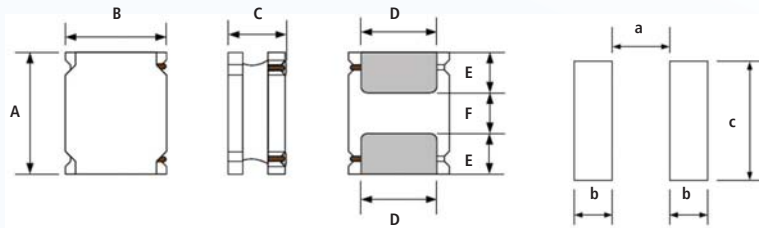
### ELECTRICAL SPECIFICATIONS

PART NO.	INDUCTANCE ( $\mu$ H)	Rdc ( $\Omega$ )		SATURATION CURRENT <sup>5</sup> (A)		RMS CURRENT <sup>4</sup> (A)	SRF MHZ (REF)
		Max.	Typ.	Max.	Typ.	Typ.	Min.
TYS252012LR47N-10	0.47	0.056	0.047	3.82	4.27	2.15	160
TYS252012L1R0N-10	1.0	0.083	0.069	2.59	2.90	1.93	110
TYS252012L1R5M-10	1.5	0.136	0.113	2.24	2.51	1.40	97
TYS252012L2R2M-10	2.2	0.199	0.166	1.85	2.07	1.15	69
TYS252012L3R3M-10	3.3	0.244	0.203	1.61	1.80	1.04	62
TYS252012L4R7M-10	4.7	0.348	0.290	1.12	1.25	0.84	47
TYS252012L6R8M-10	6.8	0.536	0.447	0.98	1.09	0.69	38
TYS252012L100M-10	10	0.637	0.531	0.79	0.88	0.62	34
TYS252012L150M-10	15	1.469	1.224	0.68	0.77	0.42	25
TYS252012L220M-10	22	1.824	1.520	0.53	0.59	0.38	20

- 1 Electrical specifications at 20°C.
- 2 Tolerance: M:  $\pm 20\%$ , N:  $\pm 30\%$
- 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

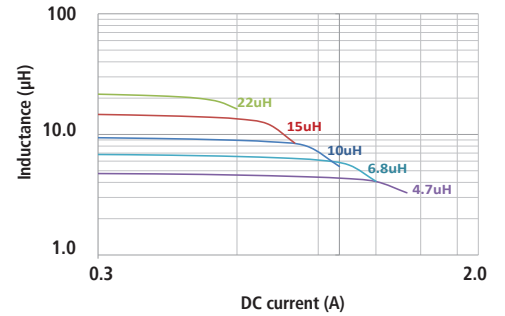
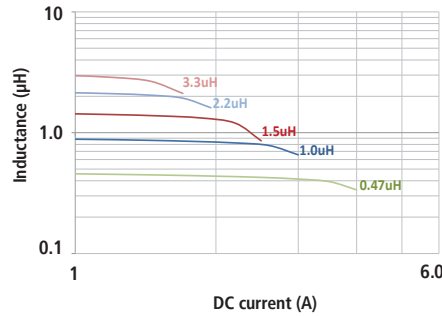


A	B	C	D	E	F	a	b	c
2.5 $\pm$ 0.1	2.0 $\pm$ 0.1	1.2 Max.	1.5 $\pm$ 0.2	0.8 $\pm$ 0.2	0.8 $\pm$ 0.2	0.8 Typ.	0.85 Typ.	2.0 Typ.

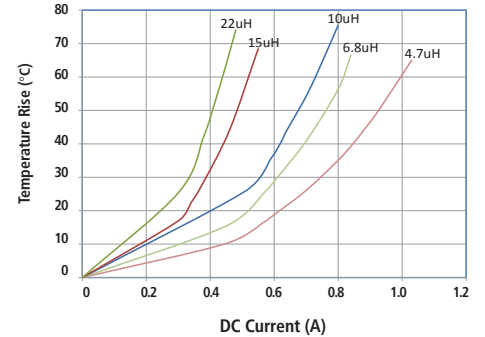
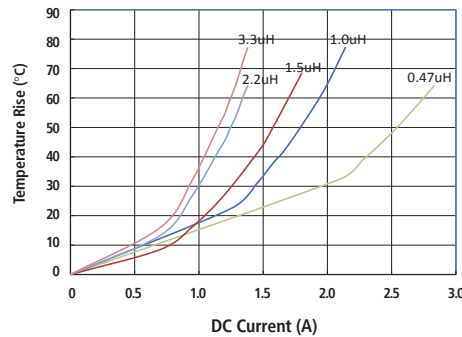
USA: +1.866.928.8181  
Europe: +49.0.8031.2460.0  
Asia: +86.755.2714.1166

### TYPICAL ELECTRICAL CHARACTERISTICS

Typical L vs Current



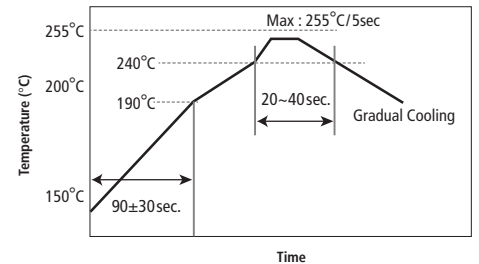
Characters of Temperature Rise



### 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	2 5 2 0 1 2	L	4 R 7	M	-	1 0
Product series code	Part size code	Low profile series	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 252012L 0413

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