Laird
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TYS6045
SMD Power Inductor Series

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)	Rdc (Ω) ±30%	SATURATION CURRENT[5] (A)	RMS CURRENT[4] (A)	SRF MHZ (REF)
TYS60451R0N-10	1	0.011	9.85	5.14	100
TYS60451R3N-10	1.3	0.010	8.35	5.40	100
TYS60451R5N-10	1.5	0.012	8.80	4.95	65
TYS60451R8N-10	1.8	0.012	7.60	4.95	74
TYS60452R2N-10	2.2	0.014	6.75	4.60	52
TYS60452R3N-10	2.3	0.021	6.00	3.50	60
TYS60453R0N-10	3	0.020	5.60	3.80	35
TYS60453R3N-10	3.3	0.021	5.90	3.70	32
TYS60454R5M-10	4.5	0.026	4.97	3.30	24
TYS60454R7M-10	4.7	0.026	4.97	3.30	24
TYS60456R3M-10	6.3	0.031	4.43	3.00	26
TYS60456R8M-10	6.8	0.031	3.90	3.00	20
TYS6045100M-10	10	0.048	3.20	2.45	15
TYS6045150M-10	15	0.068	2.50	2.05	12
TYS6045220M-10	22	0.089	2.05	1.80	10
TYS6045330M-10	33	0.137	1.65	1.45	7.8
TYS6045470M-10	47	0.200	1.40	1.20	6.4
TYS6045680M-10	68	0.289	1.20	1.00	6.4
TYS6045101M-10	100	0.433	0.95	0.80	4.2
TYS6045221M-10	220	0.834	0.70	0.59	3.5
TYS6045331M-10	330	1.270	0.57	0.57	2.8

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.)

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

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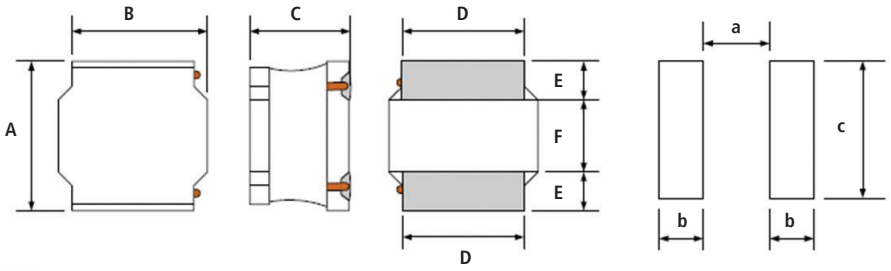
SHAPES AND DIMENSIONS

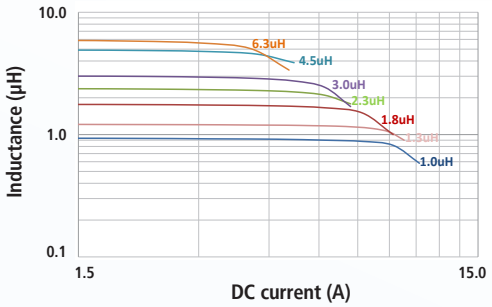
Unit: mm

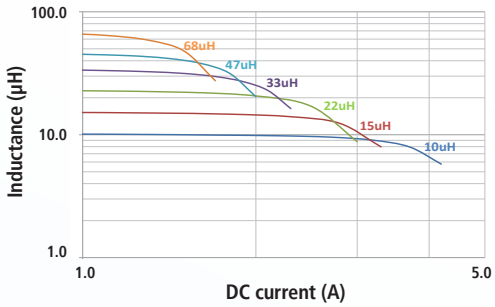


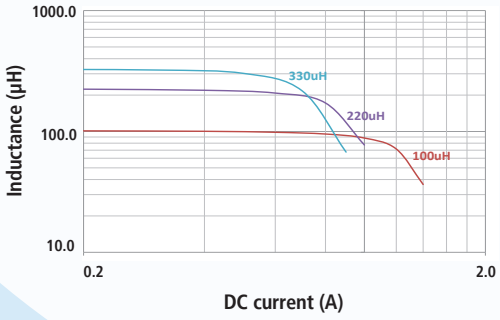
A	B	C max	D	E	F	a typ	b typ	c typ
6.0±0.3	6.0±0.3	4.5 max	4.9±0.3	1.55±0.3	2.9±0.3	2.8 typ	1.7 typ	5.7 typ

TYPICAL ELECTRICAL CHARACTERISTICS

Typical L vs Current







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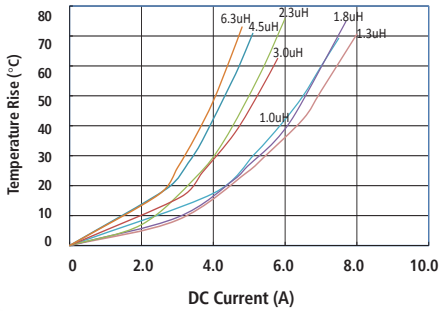
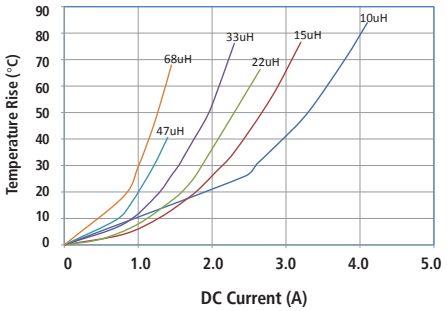
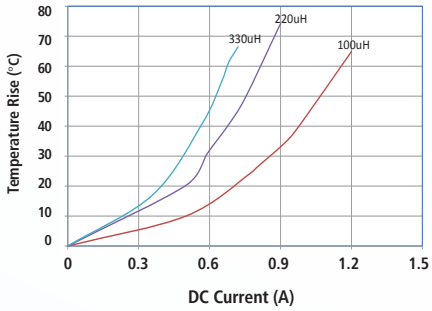
Characters of Temperature Rise



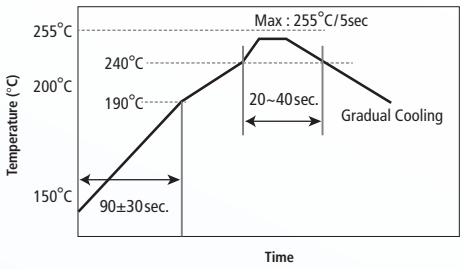




PACKAGING INFORMATION

- Standard Tape and Reel Quantity (PCS) = 1500
- Reel Size = 13 inches

Temperature Profile of Reflow Soldering



ORDERING INFORMATION

PART NUMBER EXAMPLE

T Y S	6 0 4 5	4 R 5	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)