



FEATURES



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

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 (μ H)	R _{dc} (Ω) $\pm 30\%$	SATURATION CURRENT ⁵ (A)	RMS CURRENT ⁴ (A)	SRF MHZ (REF)
TYS50201R0N-10	1	0.020	4.10	3.80	114
TYS50201R5N-10	1.5	0.026	4.10	3.20	68
TYS50202R2N-10	2.2	0.032	3.20	2.90	57
TYS50203R3N-10	3.3	0.043	2.55	2.50	46
TYS50203R6N-10	3.6	0.043	2.80	2.50	43
TYS50204R7M-10	4.7	0.057	2.50	2.20	37
TYS50206R8M-10	6.8	0.083	2.05	1.80	30
TYS5020100M-10	10	0.110	1.70	1.55	24
TYS5020150M-10	15	0.165	1.35	1.25	20
TYS5020220M-10	22	0.226	1.15	1.10	14

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.

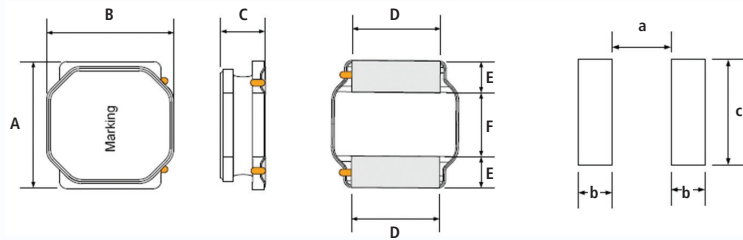
5 Saturation Current is the DC current at which the inductance drops approximate 30% from its value without current.

6 Operate temperature range: -25°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 Max.	D	E	F	a Typ.	b Typ.	c Typ.
5.0 $\pm$ 0.2	5.0 $\pm$ 0.2	2.0	4.0 $\pm$ 0.2	1.25 $\pm$ 0.2	2.5 $\pm$ 0.2	2.3	1.4	4.2

global solutions: local support™

USA: +1.866.928.8181

Europe: +49.0.8031.2460.0

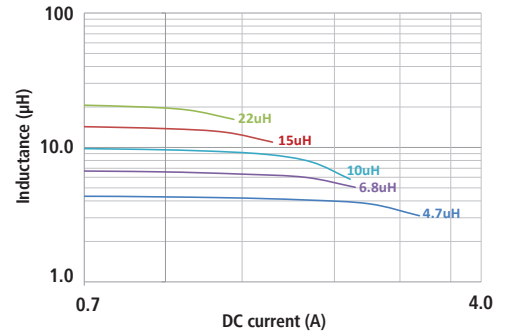
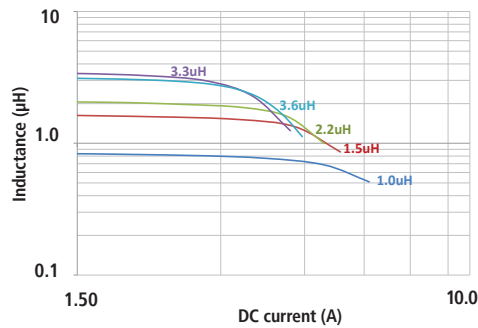
Asia: +86.755.2714.1166

www.lairdtech.com

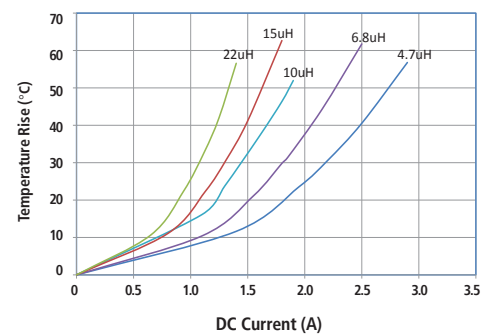
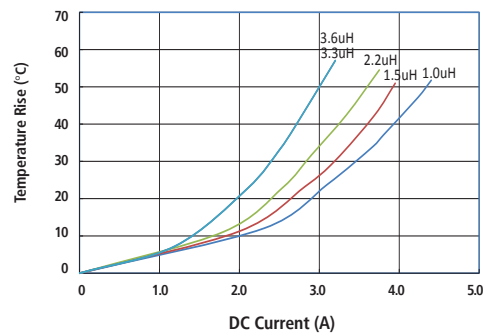
Sample Kit No. **K520** is available
for the above parts (5pcs each)
by contacting your local
Laird Technologies office.

TYPICAL ELECTRICAL CHARACTERISTICS

Typical L vs Current



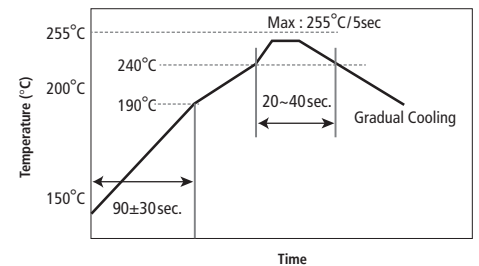
Characters of Temperature Rise



PACKAGING INFORMATION

- Standard Tape and Reel Quantity (PCS) = 2500
- Reel Size = 13 inches

Temperature Profile of Reflow Soldering



ORDERING INFORMATION

PART NUMBER EXAMPLE

T	Y	S	5	0	2	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 5020 1012

Any information furnished by Laird Technologies, Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird Technologies materials rests with the end user. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2012 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trade marks or registered trade marks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird Technologies or any third party intellectual property rights.