

TYS5020 SMD Power Inductor Series



Innovative **Technology** for a **Connected** World

FEATURES **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 (µH)	Rdc (Ω)±30%	SATURATION CURRENT⁵ (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

Electrical specifications at 20°C. 1

2 Tolerance: M: ±20%, N:±30% Inductance tested at 100 KHz, 1V 3

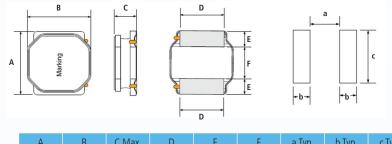
4

RMS Current is defined based on temperature rise up to or less than 40°C from 20°C ambient. Saturation Current is the DC current at which the inductance drops approximate 30% from its value without current. 5

Operate temperature range: -25°C~+125°C (including self-temperature rise)

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

SHAPES AND DIMENSIONS Unit: mm



A	В	C Max.	D	E	F	a Typ.	b Typ.	c Typ.	l
5.0±0.2	5.0±0.2	2.0	4.0±0.2	1.25±0.2	2.5±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

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

www.lairdtech.com

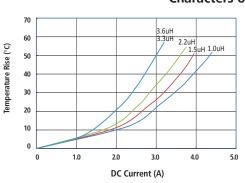


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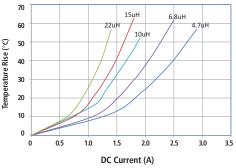
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Typical L vs Current 100 10 3.3uH Inductance (µH) Inductance (µH) 1.0 2.2uH — 15uH 10.0 **1.5uH** 10uH 6.8uH < 1.0uH 4.7uH 0.1 1.0 10.0 0.7 4.0 1.50 DC current (A) DC current (A)

TYPICAL ELECTRICAL CHARACTERISTICS



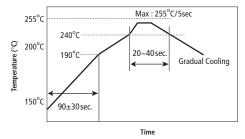
Characters of Temperature Rise



PACKAGING INFORMATION

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

Temperature Profile of Reflow Soldering



ORDERING INFORMATION

PART NUMBER EXAMPLE



SIP-DS-TYS 5020 1012

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