



**Features :**

- ◆ Excellent solderability and high heat resistance.
- ◆ Magnetic-resin shielded construction reduces buzz noise to ultra-low levels.
- ◆ Ferrite core has excellent impact resistance and non-damage durability.
- ◆ Closed magnetic circuit design reduces leakage flux and electro magnetic interference.
- ◆ 30% higher current rating than conventional inductors of equal size.
- ◆ Takes up less PCB real estate and save more power.

**Environmental Data :**

- ◆ Operating temperature: - 40°C ~ +125°C, (Including coil's self temperature rise).
- ◆ Ambient temperature: - 40°C ~ +85°C. (referring to I<sub>rms</sub>)
- ◆ Storage temperature(on tape & reel): - 20°C ~ +60°C; 75% RH max.
- ◆ RoHS ,REACH compliance ,Halogen free available.

**Applications :**

- ◆ LED Lighting, VR, AR.
- ◆ Flat-screen TVs, Blue-ray disc recorders, set top box, movie cameras, smart phone.
- ◆ Notebooks, desktop computers, servers, graphic cards.
- ◆ Portable grming devices, personal navigation systems, personal mulitmedia devices.
- ◆ Telecom base stations.



**Product Identification :**

**TSNR**

①

**6045**

②

**S**

③

**1R0**

④

**N**

⑤

**T**

⑥

① Series name	
TSNR	Wire wound, Resin coating SMD Power Inductor

③ Material type	
S	Standard

④ Inductance Value Code	
Code Example	Inductance Value
1R0	1.0 μH
100	10 μH
101	100 μH

⑤ Inductance Tolerance	
Code	Tolerance
K	± 10%
M	± 20%
N	± 30%

⑥ Packing	
T	Tape Carrier Package

② External Dimensions [L x W x H] (mm)	
2510	2.5 x 2.0 x 1.0
2512	2.5 x 2.0 x 1.2
3010	3.0 x 3.0 x 1.0
3012	3.0 x 3.0 x 1.2
3015	3.0 x 3.0 x 1.5
4010	4.0 x 4.0 x 1.0
4012	4.0 x 4.0 x 1.2
4018	4.0 x 4.0 x 1.8
4020	4.0 x 4.0 x 2.0
4026	4.0 x 4.0 x 2.6
4030	4.0 x 4.0 x 3.0
5012	5.0 x 5.0 x 1.2
5020	5.0 x 5.0 x 2.0
5040	5.0 x 5.0 x 4.0
6020	6.0 x 6.0 x 2.0
6028	6.0 x 6.0 x 2.8
6040	6.0 x 6.0 x 4.0
6045	6.0 x 6.0 x 4.5
8040	8.0 x 8.0 x 4.0
8050	8.0 x 8.0 x 5.0
8065	8.0 x 8.0 x 6.5
1050	10.0 x 10.0 x 5.0

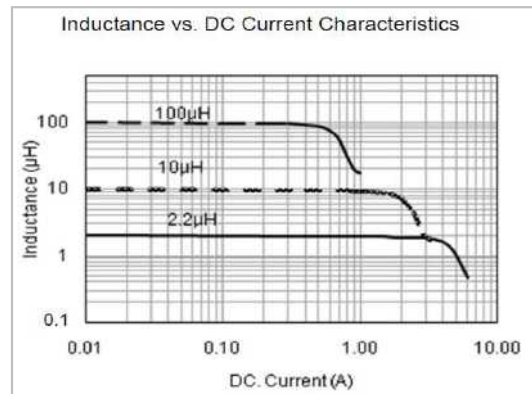
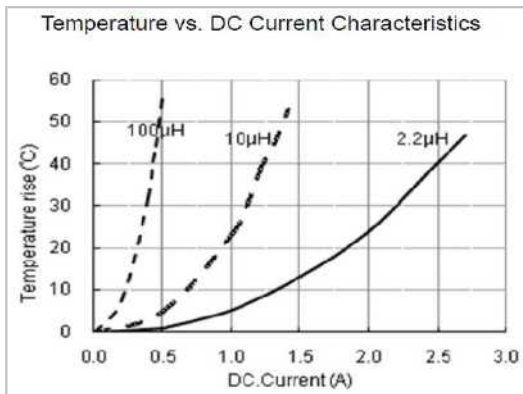
**Electrical Specification | TSNR4020S Series**

Part Number	Inductance <sup>①</sup> L [ $\mu$ H ]	Heat Rating current <sup>②</sup>		Saturation current <sup>③</sup>		DC Resistance <sup>④</sup>		Self resonant frequency S.R.F [ MHz ] Min.
		$I_{rms}$ [ A ]		$I_{sat}$ [ A ]		$R_{DC}$ [ $\Omega$ ] max.		
		Max.	Typ.	Max.	Typ.	Max.	Typ.	
TSNR4020S-330MT	33 $\pm$ 20%	0.49	0.68	0.85	0.93	0.715	0.550	11
TSNR4020S-390MT	39 $\pm$ 20%	0.46	0.64	0.82	0.90	0.845	0.650	11
TSNR4020S-430MT	43 $\pm$ 20%	0.45	0.63	0.77	0.85	0.845	0.660	10
TSNR4020S-470MT	47 $\pm$ 20%	0.44	0.61	0.74	0.81	0.923	0.710	10
TSNR4020S-510MT	51 $\pm$ 20%	0.42	0.59	0.70	0.77	0.975	0.750	10
TSNR4020S-560MT	56 $\pm$ 20%	0.41	0.57	0.66	0.72	1.040	0.800	10
TSNR4020S-620MT	62 $\pm$ 20%	0.39	0.52	0.65	0.71	1.170	0.900	9.6
TSNR4020S-680MT	68 $\pm$ 20%	0.36	0.50	0.61	0.67	1.380	1.060	7.7
TSNR4020S-750MT	75 $\pm$ 20%	0.35	0.49	0.70	0.77	1.510	1.160	7.7
TSNR4020S-820MT	82 $\pm$ 20%	0.34	0.47	0.50	0.55	1.520	1.170	7.2
TSNR4020S-101MT	100 $\pm$ 20%	0.31	0.43	0.48	0.53	1.020	1.550	6.3

\* Custom design are available upon requested.

1. Inductance measured at: 100kHz, 1Vrms, 0Adc, on an Agilent/HP4284A LCR meter or equivalent.
2. Heat rating current : DC current that causes the temperature rise ( $\Delta t=40^{\circ}C$ ) from 20 $^{\circ}C$  ambient.
3. Isat current : DC current at which the inductance drops approximate 30% from its value without current.
4. All test data is referenced to 20 $^{\circ}C$  ambient.
5. Rated current: Isat or Irms, whichever is smaller.

**Typical Electrical Characteristics:**



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		$I_{rms}$ [ A ]		$I_{sat}$ [ A ]		$R_{DC}$ [ $\Omega$ ] max.		
		Max.	Typ.	Max.	Typ.	Max.	Typ.	
TSNR4026S-1R0NT	1.0 $\pm$ 30%	3.00	3.30	3.30	3.80	0.031	0.024	151
TSNR4026S-1R2NT	1.2 $\pm$ 30%	2.30	3.30	3.10	3.40	0.039	0.030	120
TSNR4026S-1R5NT	1.5 $\pm$ 30%	2.30	3.10	2.40	2.90	0.039	0.030	100
TSNR4026S-2R2MT	2.2 $\pm$ 20%	2.00	3.80	2.10	2.40	0.052	0.040	96
TSNR4026S-3R3MT	3.3 $\pm$ 20%	1.70	2.50	1.80	2.00	0.065	0.050	58
TSNR4026S-4R7MT	4.7 $\pm$ 20%	1.60	2.30	1.45	1.70	0.072	0.055	46
TSNR4026S-6R8MT	6.8 $\pm$ 20%	1.50	2.00	1.30	1.50	0.085	0.065	33
TSNR4026S-100MT	10 $\pm$ 20%	1.30	1.90	1.00	1.20	0.110	0.085	26
TSNR4026S-150MT	15 $\pm$ 20%	1.10	1.50	0.90	1.00	0.143	0.110	19
TSNR4026S-220MT	22 $\pm$ 20%	0.90	1.40	0.60	0.80	0.214	0.165	13
TSNR4026S-330MT	33 $\pm$ 20%	0.70	1.00	0.55	0.65	0.351	0.270	9
TSNR4026S-470MT	47 $\pm$ 20%	0.65	0.90	0.40	0.55	0.390	0.300	6