

NRSE Series

SMD Shielded Tiny Power Inductor

Size 5040

CHARACTERISTICS

- Magnetic resin for higher current and semi-magnetically shielded
- Quantity: 1500pcs

APPLICATION

- DC/DC converter
- LC filter

Dimensions: [mm]

Land Pattern: [mm]



Electrical Properties:

Inductance (nH)		DC Resistance (mΩ)		Q Factor		Temperature Coefficient of Inductance (%)		Temperature Coefficient of Resistance (%)		Power Rating (W)		Operating Temperature (°C)	
4.9	0.4	3.0	3.0	9.0	3.0	6.0	3.0	4.0	3.0	2.0	3.0	1.0	2.0
2.0	2.8	0.2	8.0	2.0	5.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
1.0	2.0	0.1	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.3	0.1	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.8	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
1.9	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
2.2	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
2.4	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
2.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
3.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
3.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
3.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
4.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
4.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
4.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
5.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
5.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
5.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
6.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
6.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
6.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
7.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
7.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
7.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
8.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
8.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
8.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
9.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Part No		Tolerance	Satura on Current (A)	Temperature Rise Current (A)	DCR $\pm 30\%$ (m Ω)
NRSE5040-390M	39.0	$\pm 20\%$	1.20	1.10	225
NRSE5040-470M	47.0	$\pm 20\%$	1.10	1.00	270
NRSE5040-560M	56.0	$\pm 20\%$	1.00	0.90	375
NRSE5040-680M	68.0	$\pm 20\%$	0.90	0.80	400
NRSE5040-101M	100	$\pm 20\%$	0.75	0.70	560
NRSE5040-221M	220	$\pm 20\%$	0.45	0.40	1200
NRSE5040-471M	470	$\pm 20\%$	0.40	0.30	2800

Opera ng temperature : -40 C ~ +125 C

Temperature rise current: the actual value of DC current when the temperature rise is $\Delta T 40$ C

Satura on Current that will cause ini al inductance to drop approximately 30%

Typical Electrical Characteristics:

Inductance VS. Current Characteristics:

INDUCTANCE(μ H)

CURRENT(A)

Temperture Rise VS. Current Characteristics:

