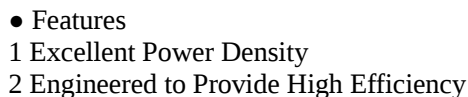


SMD POWER INDUCTORS



SCEP147S Inductance decrease by current

The top graph plots Inductance (μH) on a logarithmic y-axis (0.01 to 100) against DC current (mA) on a logarithmic x-axis (100 to 100,000). Three curves are shown: 9R5 (red), 3R4 (blue), and 0R4 (green). All curves show a sharp drop in inductance at high currents.

DC current (mA)	9R5 Inductance (μH)	3R4 Inductance (μH)	0R4 Inductance (μH)
100	10	3	0.4
1,000	10	3	0.4
10,000	10	3	0.4
20,000	5	2	0.3
50,000	-	1	0.1

SCEP147S Temperature rise by current

The bottom graph plots Temperature rise (°C) on a linear y-axis (0 to 80) against DC current (mA) on a linear x-axis (0 to 50,000). Three curves are shown: 9R5 (red), 3R4 (blue), and 0R4 (green). The temperature rise increases with current, with the 9R5 model showing the highest rise.

DC current (mA)	9R5 Temperature rise (°C)	3R4 Temperature rise (°C)	0R4 Temperature rise (°C)
0	0	0	0
5,000	10	5	2
10,000	25	15	5
15,000	60	30	10
20,000	-	45	18
25,000	-	65	28
30,000	-	-	38
35,000	-	-	48
40,000	-	-	58

- (1). Inductance tolerance for 0.4uH: $\pm 30\%$, for 0.9uH~9.5uH: $\pm 20\%$. Tested at 0.25V, 0ADC and 25°C
- (2). DCR measured at 25°C.
- (3). The DC current at which the inductance decreases by 25% from its initial value.
- (4). The DC current that results in a 40°C temperature rise from 25°C ambient.

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