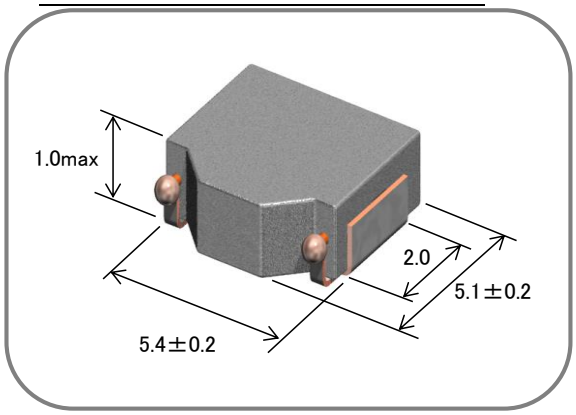
TDK-EPC Technology

SPM5010-LR Series

SMD Power Inductor

Simulation Stage

Component Image & Dimension



Features

a) Small Footprint and Low Profile Design :
Footprint : 5.4 x 5.1 mm Typ.
Height : 1.0mm Max.
b) High Power Handling Capability :
Small Copper Loss
Using Large Saturation Induction of
Fe- based metals
c) Flat inductance performance over temperature based on the high curie temperature of the iron powder core material.
d) Automatic Mounting in Tape&Reel Package.

Applications

Note Book & Mobile Computer, VRM,
Cellular Phone, HDD etc.

Electrical Specification

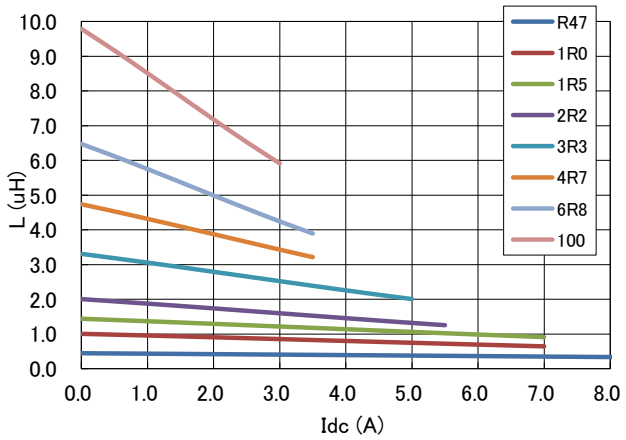
TDK Identification		Inductance at 0A (uH)	Inductance Tol. (%)	Test Freq. (kHz)	DC Resistance Spec. (m-Ohm)	DC Resistance Typ. (m-Ohm)	Rated DC Current Idc 1 (A) max.	Rated DC Current Idc 1 (A) typ.	Rated DC Current Idc 2 (A) max.	Rated DC Current Idc 2 (A) typ.
※ SPM5010T-	R47M-LR	0.47	+/-20%	100	31.5 max	28.6	6.9	9.5	4.5	4.7
※ SPM5010T-	1R0M-LR	1.0	+/-20%	100	57.2 max	52.0	5.8	5.8	3.3	3.5
※ SPM5010T-	1R5M-LR	1.5	+/-20%	100	84.1 max	76.5	5.5	5.5	2.7	2.9
※ SPM5010T-	2R2M-LR	2.2	+/-20%	100	107.5 max	97.7	4.3	4.3	2.4	2.6
※ SPM5010T-	3R3M-LR	3.3	+/-20%	100	204.4 max	185.8	2.9	3.7	1.8	1.9
※ SPM5010T-	4R7M-LR	4.70	+/-20%	100	265.7 max	241.6	2.4	3.2	1.5	1.62
※ SPM5010T-	6R8M-LR	6.80	+/-20%	100	370.4 max	336.7	2.0	2.6	1.3	1.37
※ SPM5010T-	100M-LR	10.0	+/-20%	100	648.9 max	589.9	1.7	1.9	1.0	1.04

Note. *Idc 1 : Based on the inductance change.(-30% Reduction from Nominal L Value)*
Idc 2 : Based on the self temperature rise. (+40 deg typ.)
Operating Temperature Range: -40 ℃～+125 ℃ (including self temperature rise)

Caution: Please contact our sales person when you consider organic solvent or aqueous cleaning.

※ *Simulation Data*

Inductance vs.DC Superposition



Recommended pad layout