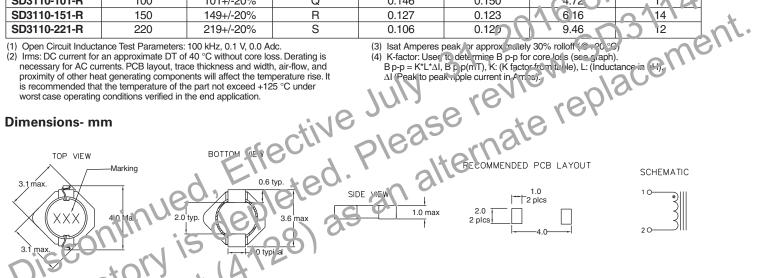
#### **Product specifications**

Part Number	Rated Inductance (µH)	OCL (1) (μH)	Part Marking Designator	Irms (2) (A)	Isat (3) (A)	DCR (Ω) typ. @ +20 °C	K-factor (4)
SD3110-R50-R	0.50	0.44+/-30%	Α	1.54	2.27	0.0420	216
SD3110-R82-R	0.82	0.82+/-30%	В	1.30	1.67	0.0589	191
SD3110-1R0-R	1.0	1.05+/-30%	С	1.21	1.47	0.0683	169
SD3110-1R5-R	1.5	1.60+/-30%	D	0.99	1.19	0.103	137
SD3110-2R2-R	2.2	2.27+/-30%	Е	0.82	1.00	0.149	115
SD3110-3R3-R	3.3	3.48+/-30%	F	0.72	0.81	0.195	93
SD3110-4R7-R	4.7	4.96+/-30%	G	0.59	0.68	0.285	78
SD3110-6R8-R	6.8	6.70+/-30%	Н	0.54	0.58	0.346	67
SD3110-8R2-R	8.2	8.01+/-30%	I	0.48	0.53	0.432	61
SD3110-100-R	10.0	10.18+/-30%	J	0.44	0.47	0.505	54
SD3110-150-R	15.0	15.32+/-20%	K	0.36	0.38	0.764	44
SD3110-220-R	22.0	21.49+/-20%	Ĺ	0.30	0.32	1.13	37
SD3110-330-R	33.0	32.72+/-20%	M	0.26	0.26	1.50	30
SD3110-470-R	47.0	46.29+/-20%	N	0.22	0.22	2.06	25
SD3110-680-R	68.0	68.04+/-20%	0	0.179	0.182	3.13	21
SD3110-820-R	82.0	82.65+/-20%	Р	0.167	0.166	3.57	19
SD3110-101-R	100	101+/-20%	Q	0.146	0.150	4.72	17
SD3110-151-R	150	149+/-20%	R	0.127	0.123	616	14
SD3110-221-R	220	219+/-20%	S	0.106	0.120	9.46	12

<sup>(1)</sup> Open Circuit Inductance Test Parameters: 100 kHz, 0.1 V, 0.0 Adc.

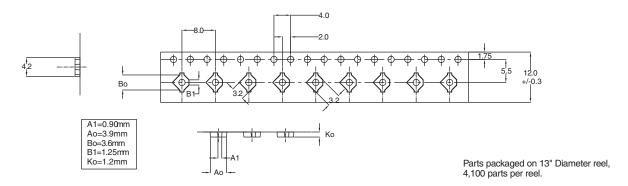
(3) Isat Amperes peak or approximately 30% rolloff (2.,?o.°C) (4) K-factor: User it determine B p-p for core loss (sco-graph).

### **Dimensions- mm**



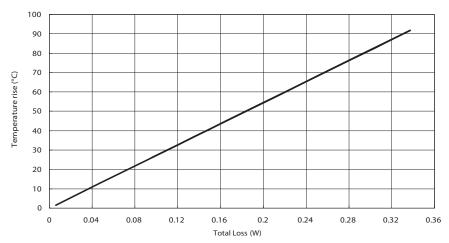
Part Ma king:
3 Digit Marking: (1st digit. I), licates inductance value per letter in Part Marking Designator); (2nd digit: Bi-weekly production date code); (3rd digit: Last digit of the year produced).
Do not route trade on vivo underneath the inductor

# Packaging information- mm

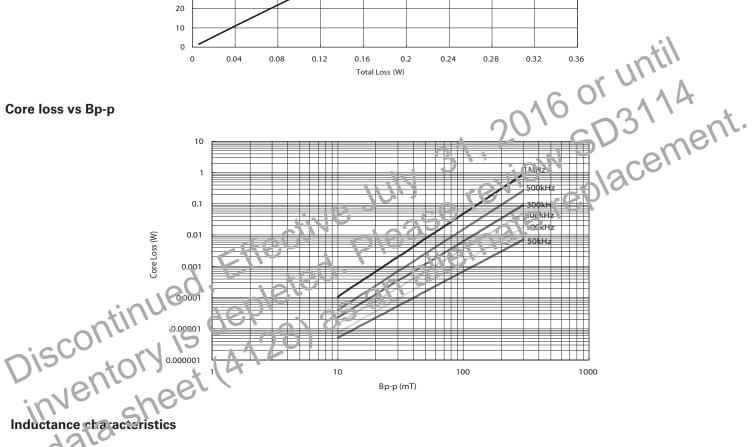


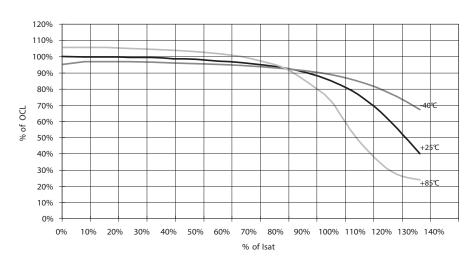
<sup>(2)</sup> Irms: DC current for an approximate DT of 40 °C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed +125  $^{\circ}$ C under worst case operating conditions verified in the end application.

## Temperature rise vs total loss loss



## Core loss vs Bp-p





#### **Solder Reflow Profile**

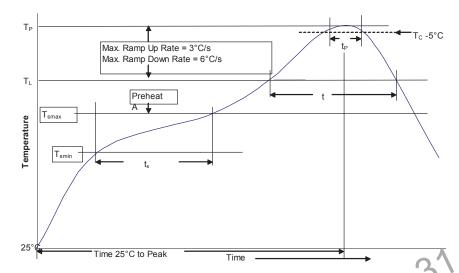


Table 1 - Standard SnPb Solder (T<sub>c</sub>)

	Volume	Volume	
Package	mm³	mm³	
Thickness	<350	≥350	
<2.5mm	235°C	220°C	
≥2.5mm	220°C	220°C	

Table 2 - Lead (Pb) Free Solder (Tc)

Package	Volume mm³	Volume mm³	Volume mm³
Thickness	<350	350 - 2000	>2000
<1.6mm	260°C	260°C	260°C
1.6 - 2.5mr	260°C	250°C	24.5°C
>2.5mni	250°C	2150	245°C

## Reference JDEC J-STD-020

25° €	1.0 – 2.3111 >2.5mm	250°C 245°C 245°C
Time 25°C to Peak  Time  Time  Time  Time	Jy 31, viev	y Sisceme.
Profile Feature	Standaro Shi b Solder	l cea (Pb) Free Solder
	SO 100°C	150°C
<ul> <li>Temperature max. (T<sub>emax</sub>)</li> </ul>	150°C	200°C
• Time (T <sub>Smi''</sub> to Sinay) (t <sub>S</sub> )	60-120 Seconds	60-120 Seconds
Average ramp up rate T <sub>smax</sub> to T <sub>p</sub>	3 °C/ Second Max.	3°C/ Second Max.
Liquidous temperature (TL)	183°C	217°C
Time at liquidous (t <sub>1</sub> )	60-150 Seconds	60-150 Seconds
Peak package volty temperature (Tp,*	Table 1	Table 2
Time $(t_p)^*$ v ithin 5 °C of the specimed class in a ion temperature ( $T_0$	20 Seconds**	30 Seconds**
A.c. age ramp-down rate (Tp to T <sub>snia</sub> )	6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Feak Temperatur	6 Minutes Max.	8 Minutes Max.
Profile Feature Preheat and Soak  Temperature min. (T <sub>smin</sub> )  Temperature max. (T <sub>emax</sub> )  Time (T <sub>smin</sub> to T <sub>smax</sub> ) (t <sub>s</sub> )  Average ramp up rate T <sub>smax</sub> to T <sub>p</sub> Liquidous temperature (TL) Time at liquidous (t <sub>s</sub> )  Peak package Loty temperature (Tp,*  Time (t <sub>p</sub> *** viithin 5 °C of the specified class fication temperature (T <sub>c</sub> Average ramp-down rate (T <sub>p</sub> to T <sub>smax</sub> )	100°C 150°C 60-120 Seconds 3 Gr Second Max. 183°C 60-150 Seconds Table 1 20 Seconds** 6°C/ Second Max.	150°C 200°C 60-120 Seconds 3°C/ Second Max. 217°C 60-150 Seconds Table 2 30 Seconds** 6°C/ Second Max.

\* Tolera ce for peak profile  $\alpha$  is exture  $(T_p)$  is defined as a supplier minimum and a user maximum.

\* Tolerance for time at  $\alpha$  is a profile temperature  $(t_p)$  is defined as a supplier minimum and a user maximum.

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