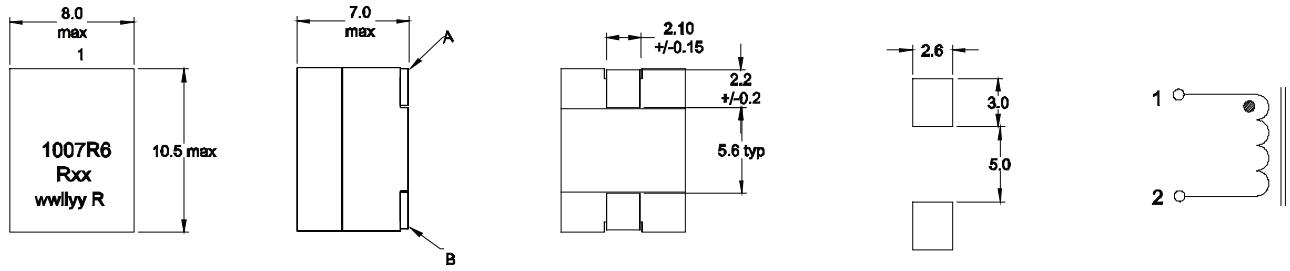
Product Specifications							
Part Number [7]	OCL [1] ±10% (nH)	FLL [2] Min. (nH)	I_{rms} [3] (Amps)	$I_{sat}1$ [4] @25°C (Amps)	$I_{sat}2$ [5] @100°C (Amps)	DCR @20°C (mΩ)	K-Factor [6]
FP1007R6-R15-R	150	108	61	75.0	60.0	0.29 ± 5%	348.8
FP1007R6-R18-R	180	129		60.0	50.0		
FP1007R6-R22-R	220	158		50.0	40.0		
FP1007R6-R27-R	270	194		41.0	33.0		
FP1007R6-R33-R	330	237		33.0	26.5		
FP1007R6-R39-R	390	280		28.0	22.5		
FP1007R6-R47-R	470	338		23.5	19.0		

1. Open Circuit Inductance (OCL) Test Parameters: 100kHz, 0.10V_{rms}, 0.0Adc
2. Full Load Inductance (FLL) Test Parameters: 100kHz, 0.1V_{rms}, $I_{sat}1$
3. I_{rms}: DC current for an approximate temperature rise 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°C under worst case operating conditions verified in the end application.
4. $I_{sat}1$: Peak current for approximately 20% rolloff at +25°C.
5. $I_{sat}2$: Peak current for approximately 20% rolloff at +100°C.
6. K-factor: Used to determine Bp-p for core loss (see graph). $B_{p-p} = K * L * \Delta I * 10^{-3}$. B_{p-p}:(Gauss), K: (K-factor from table), L: (Inductance in nH), ΔI (peak-to-peak ripple current in Amps).
7. Part Number Definition: FP1007R6-Rxx-R
   FP1007R6 = Product code and size
   Rxx= Inductance value in uH, R = decimal point
   -R suffix = RoHS compliant

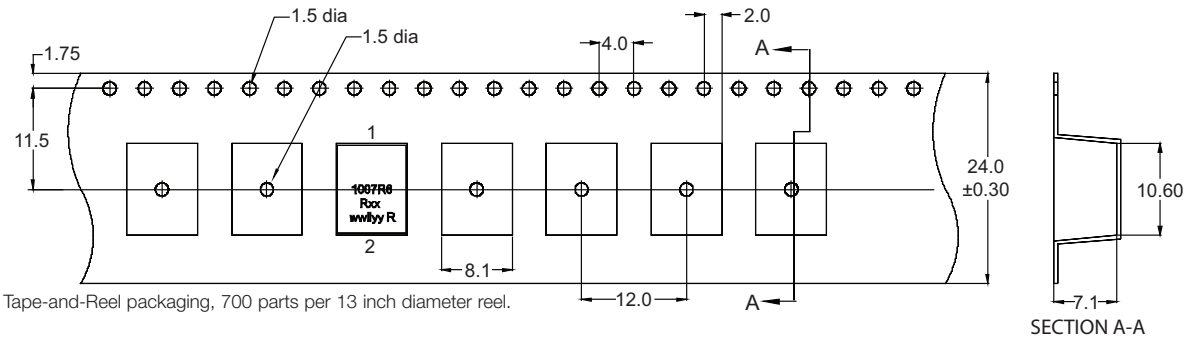
Dimensions- mm

Top View | Side View | Bottom View | Recommended Pad Layout | Schematic



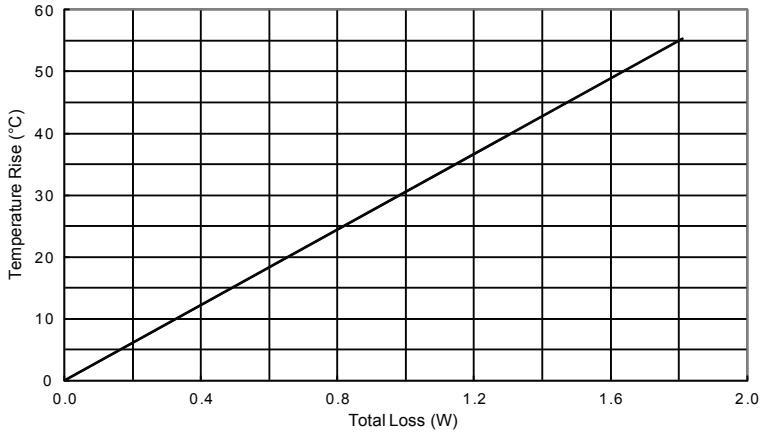
The nominal DCR is measured from point "A" to point "B"
Part Marking: 1007R6, Rxx = Inductance value in µH. (R = Decimal point) wwllyy = Date code R = Revision level Tolerance are ±0.15mm unless otherwise specified.
Soldering surfaces to be coplanar within 0.1016mm.
PCB tolerance ±0.1mm unless otherwise specified.

Packaging information - mm

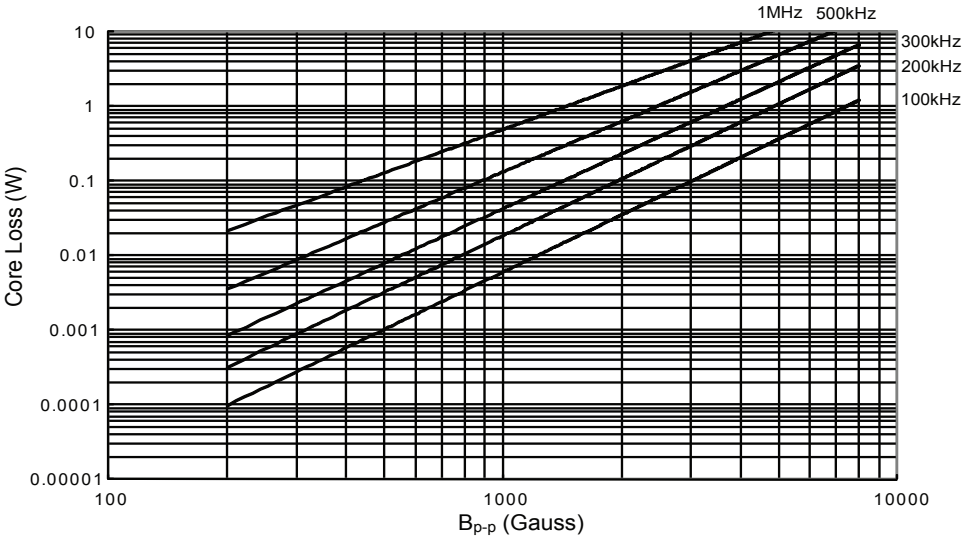


Supplied in Tape-and-Reel packaging, 700 parts per 13 inch diameter reel.

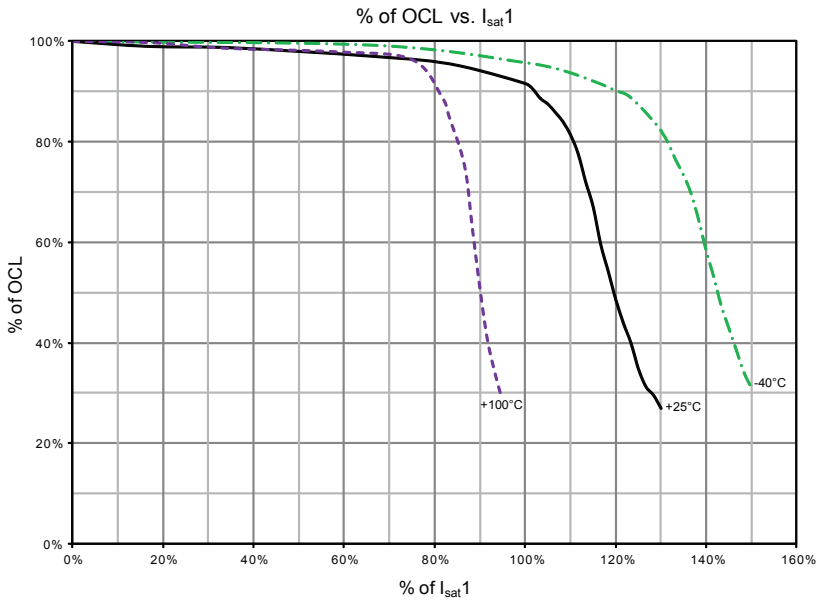
Temperature rise vs total loss



Core loss vs Bp-p



Inductance characteristics



Solder Reflow Profile

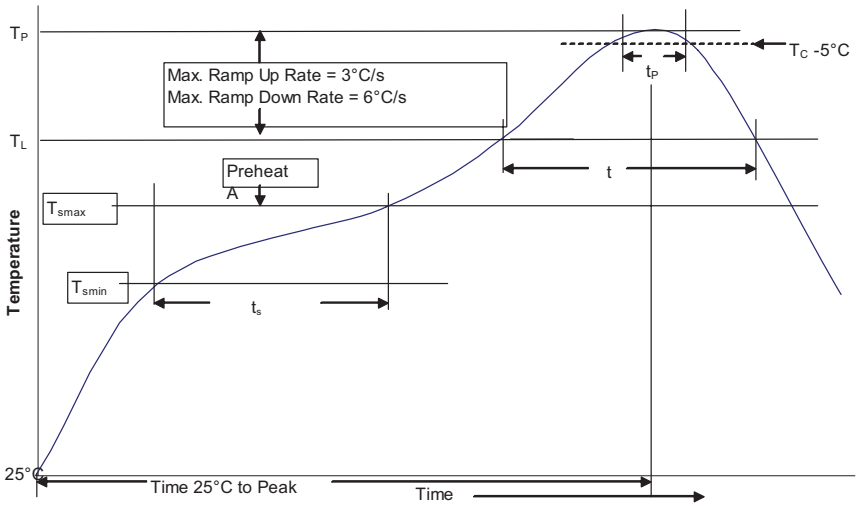


Table 1 - Standard SnPb Solder (T_C)

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

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

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reference JDEC J-STD-020

Profile Feature		Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak	• Temperature min. (T_{smin})	100°C	150°C
	• Temperature max. (T_{smax})	150°C	200°C
	• Time (T_{smin} to T_{smax}) (t_s)	60-120 Seconds	60-120 Seconds
Average ramp up rate T_{smax} to T_p		3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L) Time at liquidous (t_L)		183°C 60-150 Seconds	217°C 60-150 Seconds
Peak package body temperature (T_P)*		Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_C)		20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})		6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature		6 Minutes Max.	8 Minutes Max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

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

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/electronics

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