

PI13038 TYPE

●FEATURE

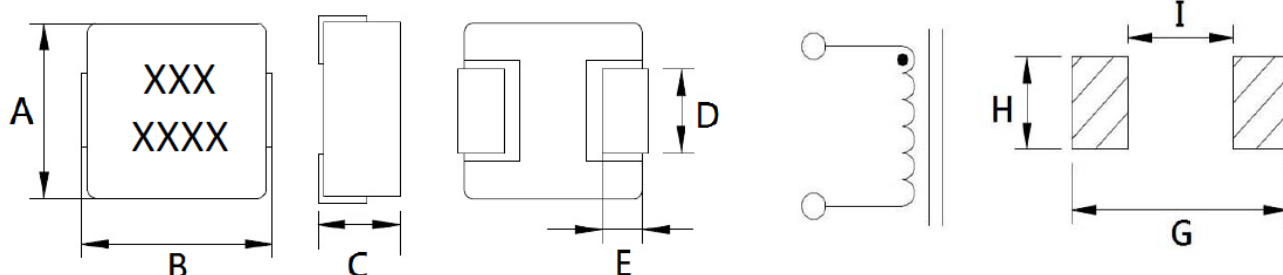
1. Shielded constrution
2. Frequency range up to 5MHz, Low DCR(Ω), Low Buzz Noise

●Applications

1. Notebook, server application, High current power supplier

●Shape and Dimension

●Schematics and Land Patterns(mm)



A=12.90mm Max ; B=14.00mm Max ; C=3.80mm Max. ; D=refer Note.7 ; E=2.40mm Ref. ; G=14.00mm Ref. ; H=5.00mm Ref. ; I=7.60mm Ref.

●Specification

P/N	L (μ H)	RDC (m Ω) Typical	RDC (m Ω)Max	Isat (A)	Irms (A)
PI13038-R10M	0.10 $\pm$ 20%	0.80	0.96	84	43
PI13038-R15M	0.15 $\pm$ 20%	1.0	1.2	75	41
PI13038-R22M	0.22 $\pm$ 20%	1.1	1.3	65	38.5
PI13038-R33M	0.33 $\pm$ 20%	1.3	1.5	62	38.5
PI13038-R47M	0.47 $\pm$ 20%	1.6	2.0	55	32
PI13038-R60M	0.60 $\pm$ 20%	1.8	2.2	51	29
PI13038-R68M	0.68 $\pm$ 20%	2.3	2.5	49	28
PI13038-R82M	0.82 $\pm$ 20%	2.6	3.0	44	25
PI13038-1R0M	1.0 $\pm$ 20%	3.3	3.5	40	24
PI13038-1R5M	1.5 $\pm$ 20%	5.1	5.5	35	19
PI13038-1R8M	1.8 $\pm$ 20%	6.0	7.0	30	16.5
PI13038-2R2M	2.2 $\pm$ 20%	7.2	8.0	29	16
PI13038-3R3M	3.3 $\pm$ 20%	11.0	12.0	27	12
PI13038-4R7M	4.7 $\pm$ 20%	14.3	15.0	24	10
PI13038-5R6M	5.6 $\pm$ 20%	17.1	18.0	19	9.5
PI13038-6R8M	6.8 $\pm$ 20%	19.8	22.0	18	9.0
PI13038-8R2M	8.2 $\pm$ 20%	24.8	28.0	16	8.5
PI13038-100M	10 $\pm$ 20%	30.4	34.0	14	7.0

Note1. Measurement frequency of Inductance value : at 100KHz

Note2. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note3. Isat: DC current at which the inductance drops 20%(typ) from its value without current

Note4. Irms: Average current for 40°C temperature rise from 25°C ambient(typical)

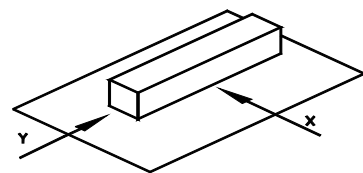
Note5. Inductance tolerance: M: $\pm 20\%$

Note6. Packaging: Taping ; Quantity: 500pcs/reel

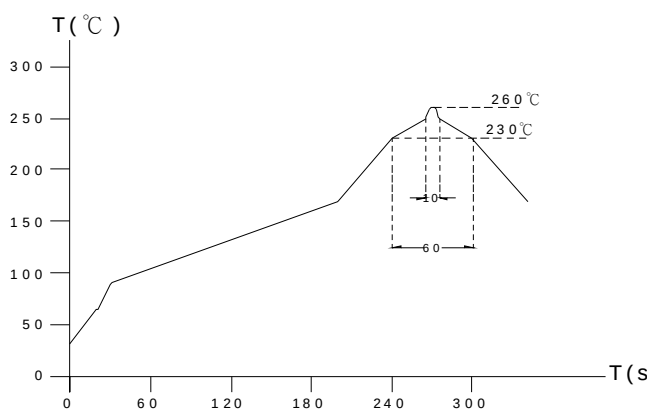
Note7. D Dimension range: R10~R82、1R0, D= 4.0 ± 0.5 mm ; R82、1R5, D= 3.0 ± 0.5 mm ; 1R8~100, D= 4.7 ± 0.3 mm

GENERAL CHARACTERISTICS

1. Operating temperature range: -55°C TO $+125^{\circ}\text{C}$ (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y withstanding at below conditions.
Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.
4. Insulating resistance: Over $100\text{M}\Omega$ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ ($-25\sim +80^{\circ}\text{C}$ degree Celsius), inductance deviation within $\pm 5.0\%$, after 96 hours.
7. Humidity characteristics (Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in $90\sim 95\%$ relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration ($10\sim 55\sim 10\text{ Hz}$) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C , 10 seconds (See attached recommend reflow)
11. Storage condition: Temperature Range: $0^{\circ}\text{C} \sim 35^{\circ}\text{C}$; $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (after PCB) , Humidity Range: $50\% \sim 70\% \text{ RH}$
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead-free heat endurance test



Lead-free the recommended reflow condition

