

# FLAT WIRE POWER INDUCTOR – EMC0872A SERIES



## ●FEATURE

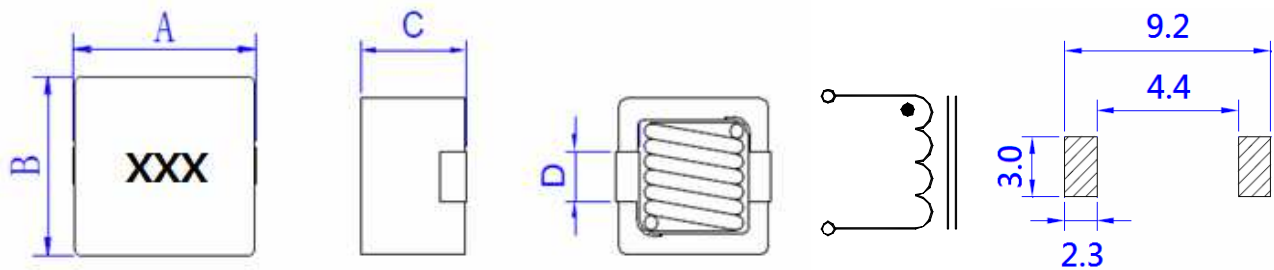
1. Shielded construction

## ●Applications

1. Notebook, server application, High current power supplier

## ●Shape and Dimension(m/m)

## ●Schematics and Land Patterns(mm)



A=8.80m/m MAX; B=8.40m/m MAX; C=7.50m/m MAX; D=2.30±0.25m/m

## ●Specification

P/N	L (μH)	RDC (mΩ) MAX	SRF (MHz) typ.	Isat (A)	Irms (A)
EMC0872A-R30M	0.30±20%	2.70	272	27.0	16.0
EMC0872A-R47M	0.47±20%	3.10	232	25.0	15.0
EMC0872A-R56M	0.56±20%	3.10	190	20.0	15.0
EMC0872A-R68M	0.68±20%	3.10	181	17.0	15.0
EMC0872A-1R0M	1.0±20%	4.30	147	15.0	13.0
EMC0872A-1R5M	1.5±20%	6.20	120	11.0	10.0
EMC0872A-2R2M	2.2±20%	6.20	97	8.0	10.0
EMC0872A-3R3M	3.3±20%	9.00	81	5.0	8.0

Note1. Measurement frequency of Inductance value : at 100KHz, 0.25V

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

Note3. Isat: DC current at which the inductance drops 30%(typ) from its value without current

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

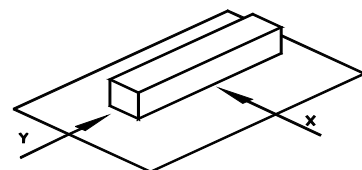
Note5. Inductance tolerance: M: ±20%

Noet6. Packing, Quantity: 500pcs/reel

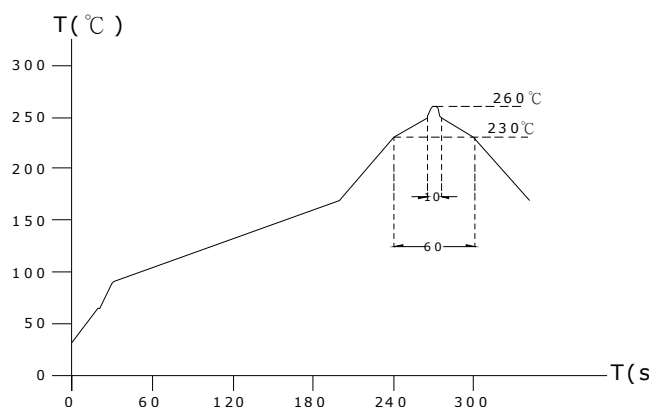


## GENERAL CHARACTERISTICS

1. Operating temperature range:  $-40^{\circ}\text{C}$  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  $100\text{V D.C.}$  between coil and core.
5. Dielectric strength: No dielectric breakdown at  $100\text{V D.C.}$  for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  ( $-25\sim +80^{\circ}\text{C}$ ).
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  $1.5\text{mm P-P}$  amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with  $981\text{m/s}^2$  ( $100\text{G}$ ) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat:  $260^{\circ}\text{C}$ , 10 seconds(See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range:  $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$  (Generally:  $21^{\circ}\text{C} \sim 31^{\circ}\text{C}$ ) , Humidity Range:  $50\% \sim 80\% \text{ RH}$  (Generally:  $65\% \sim 75\%$ ) ; Transportation condition: Temperature Range:  $-35^{\circ}\text{C} \sim 85^{\circ}\text{C}$  , Humidity Range:  $50\% \sim 95\% \text{ RH}$
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

