

Features

- The structure is coated with magnetic glue, which greatly reduces the buzzing sound;
- Metallized electrode directly on the ferrite core, strong anti-drop impact, durable;
- Closed magnetic circuit structure design, less magnetic leakage, strong anti-EMI capability;
- The rated current is 30% higher than the conventional power inductor under the same size conditions.

Applications

- LED lighting
- TV box
- personal computer
- Battery powered devices.
- Base stations
- PDA/notebook/desktop devices

Product Identification

THWPI
①

606045
②

D
③

R56
④

N
⑤

T
⑥

- ① Type : THWPI
- ② External Dimensions (L×W×H) [mm]= 606040=6.0*6.0*4.5
- ③ Feature Type: Differential
- ④ Nominal Inductance : R56=0.56 μ H
- ⑤ Inductance Tolerance :
K=±10%
M=±20%
N=±30%
- ⑥ Packing T=Tape Carrier Package

Specifications

Part Number	Inductance (uH)	Tolerance (±%)	DCR(mΩ) ±30%	Isat (A)	Irise (A)	Test Condition
THWPI606045DR56NT	0.56	30	7.5	14.5	6.20	1MH /0.25V
THWPI606045D1R0NT	1.0	30	10	9.00	5.10	100KHz /0.25V
THWPI606045D1R5NT	1.5	30	12	7.50	4.75	100KHz /0.25V
THWPI606045D1R8NT	1.8	30	13	7.50	4.60	100KHz /0.25V
THWPI606045D2R2NT	2.2	30	13	6.50	4.60	100KHz /0.25V
THWPI606045D3R3NT	3.3	30	20	5.30	3.20	100KHz /0.25V
THWPI606045D3R9NT	3.9	30	20	4.90	3.20	100KHz /0.25V
THWPI606045D4R7NT	4.7	30	24	4.50	3.00	100KHz /0.25V
THWPI606045D5R6NT	5.6	30	31	3.70	2.80	100KHz /0.25V
THWPI606045D6R8MT	6.8	20	33	3.30	2.70	100KHz /0.25V
THWPI606045D8R2MT	8.2	20	45	3.20	2.60	100KHz /0.25V
THWPI606045D100MT	10	20	52	3.00	2.50	100KHz /0.25V
THWPI606045D120MT	12	20	58	2.80	2.20	100KHz /0.25V
THWPI606045D150MT	15	20	77	2.50	1.90	100KHz /0.25V
THWPI606045D180MT	18	20	95	2.20	1.75	100KHz /0.25V
THWPI606045D220MT	22	20	115	2.00	1.50	100KHz /0.25V
THWPI606045D270MT	27	20	120	1.90	1.48	100KHz /0.25V
THWPI606045D330MT	33	20	150	1.60	1.45	100KHz /0.25V
THWPI606045D390MT	39	20	180	1.50	1.25	100KHz /0.25V
THWPI606045D470MT	47	20	220	1.40	1.20	100KHz /0.25V
THWPI606045D560MT	56	20	260	1.30	1.10	100KHz /0.25V
THWPI606045D680MT	68	20	290	1.20	0.90	100KHz /0.25V
THWPI606045D820MT	82	20	355	1.10	0.85	100KHz /0.25V
THWPI606045D101MT	100	20	430	1.00	0.80	100KHz /0.25V
THWPI606045D121MT	120	20	530	0.85	0.75	100KHz /0.25V
THWPI606045D151MT	150	20	760	0.80	0.70	100KHz /0.25V
THWPI606045D181MT	180	20	845	0.75	0.65	100KHz /0.25V
THWPI606045D221MT	220	20	890	0.63	0.55	100KHz /0.25V

Note: **Isat (A) :**

DC Saturation Current that will cause initial inductance to drop approximately 30% max.

Irise(A)

DC Current that will cause an approximate ΔT of 40 °C

Measuring Instrument :

L: HIOKI3532-50

DCR: HIOKI 3540

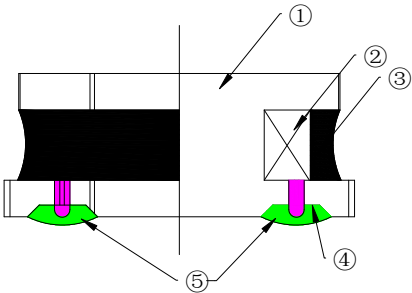
Isat / Irise: HP4284A+42841

Storage Temperature range : -40°C ~ +105°C

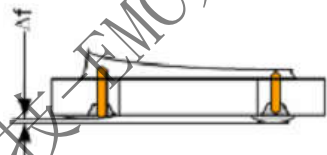
Operating temperature range: -40°C ~ +125°C (Including coil's self temperature rise)

Structure

The structure of THWPI606045 Series product.

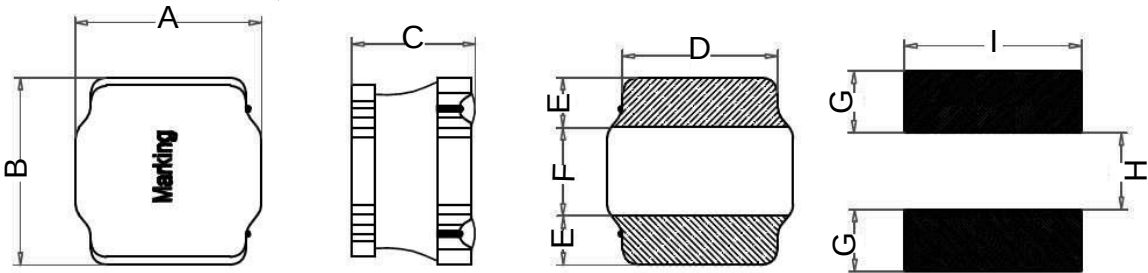


No.	Part name	Material	Ceaiya P/N
①	Drum Core	Ni-Zn Ferrite Core	CY/TW
②	Wire	Polyurethane enameled copper wire	YLSL
③	Adhesive	Epoxy ResinMagnetic Powder	CH
④	PlatingElectrodes	Plating: Ag 10- 20μm Ni 1- 3 μm Sn 3- 7 μm	
⑤	OuterElectrodes	Top surface solder coating Sn99% 、Ag0.3% 、Cu0.7%	YX



Δf: Clearance between terminal and the surface of plate must be 0.1mm max when coil is placed on a flat plate.

Package Mechanical Data And Suggested Land Pattern

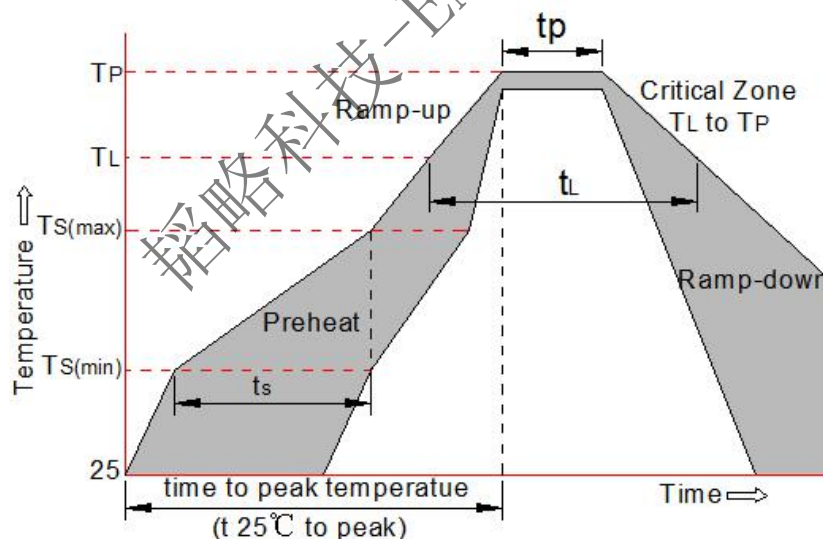


A	B	C	D	E	F	G	H	I
6.0 ± 0.3	6.0 ± 0.3	4.5 Max	4.9±0.3	1.55±0.3	2.9±0.3	1.7 Ref	2.8 Ref	5.7 Ref

notes : Jet code size long 3.6±0.5mm, wide : 2.5±0.5mm

Soldering Parameters

Reflow Condition		Pb-Free Assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquid us)	+217°C
	-Temperature(t_L)	60-90 secs .
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



Contact Information

SHENZHEN TOP-FLIGHT TECHNOLOGY CO.,LTD

4th Floor, C Building, Quansen Industrial Park , Bulong Road, Longhua New District, Shenzhen

Tel: 86-755-82908191 Fax: 86-755-82908701 Email:kang@topleve.com

Website: <http://www.topleve.com>