ROHS REACH HF

承 認 書

SPECIFICATION FOR APPROVAL

Customer Name: 2144

Description Part No.:

Customer Part No.:

Sample No.:

DDY Part No.: DSE575047-系列

DRAWING		
MADE	CHECKED	APPROVED
王海玲	赵万虎	肖中华
DATE:	2024年3月3日	

CUSTOMER APPROVE

惠 州 市 德 立 电 子 有 限 公 司

HUI ZHOU DE LI ELECTRONICS CO., LTD

廣東省博羅縣洲際工業園梅園三路

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Version of Changed Record

DATE	REV	CHANGED CONTENTS	DRAFT	APPROVED
2024/3/3	A	新版发行	赵万虎	肖中华

*** Special notes:**
This product is non-vehicle certified.

1. Scope

This specification applies to the DSE575047 Series of wire wound SMD power inductor.

2.PRODUCT IDENTIFICATION

DSE 575047 - 1R5 □ - □
(1) (2) (3) (4) (5)

（1）.Series name （产品品名）

（2）.Dimensions （产品尺寸）

（3）. Inductance value （电感值）

1R5: 1.5μH 221：220μH

（4）. Tolerance（误差值）

K: ±10%; M: ±20%; N: ±30%

（5）. Environmental status（环保状态）

LF- Lead free; HF-Halogen free;FP-Free red phosphor.

3. Electrical Characteristics

Please refer to Item 5.

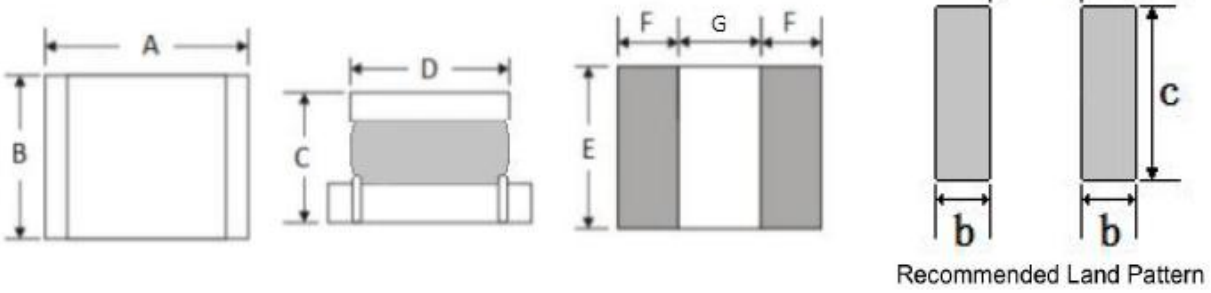
1). Operating temperature range (individual chip without packing): -40℃～+125℃ .

2). Storage temperature range (packaging conditions): -40℃～+85℃ and RH 70% (Max.).

3). Rating DC current: Temperature rise(△T) is 40℃ approximately at Irms.

4). Saturation DC current: Inductance drop approximately 10% of L_0 at Isat.

4. Shape and Dimensions (Unit:mm)



Recommended Land Pattern

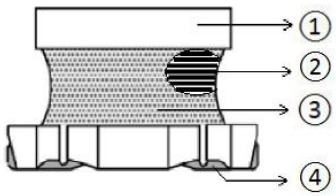
Series	A	B	C	D	E	F	G	a Typ.	b Typ.	c Typ.
DSE575047	5.7±0.3	5.0±0.3	4.7±0.3.	5.0±0.3	4.0 Typ.	1.85 Typ.	2.0 Typ.	1.8	1.9	5.2

5. Electrical Characteristics

NO.	Part Number	Inductance	SRF	DC Resistance	Isat(A)	Irms(A)	Marking
		1MHz/1.0V		Max.	Max.	Typ.	
	Units	（uH）	MHz Min.	Ω	A	A	
1	☐ DSE575047-R47N-HF	0.47±30%	170.0	0.017	7.50	10.0	N/A
2	☐ DSE575047-1R0N-HF	1.00±30%	105.0	0.025	6.00	9.0	N/A
3	☐ DSE575047-1R5N-HF	1.50±30%	85.0	0.029	4.50	7.50	N/A
4	☐ DSE575047-2R2M-HF	2.20±20%	55.0	0.038	4.00	5.60	N/A
5	☐ DSE575047-3R3M-HF	3.30±20%	33.0	0.047	4.00	4.80	N/A
6	☐ DSE575047-4R7M-HF	4.70±20%	30.0	0.054	3.50	4.20	N/A
7	☐ DSE575047-6R8M-HF	6.80±20%	14.6	0.096	2.80	3.50	N/A
8	☐ DSE575047-100M-HF	10.0±20%	11.8	0.120	2.50	3.00	N/A
9	☐ DSE575047-150M-HF	15.0±20%	9.6	0.195	2.40	2.80	N/A
10	☐ DSE575047-220M-HF	22.0±20%	9.3	0.247	1.80	2.40	N/A
11	☐ DSE575047-330M-HF	33.0±20%	6.8	0.416	1.50	2.00	N/A
12	☐ DSE575047-470M-HF	47.0±20%	6.8	0.520	1.25	1.80	N/A
13	☐ DSE575047-680M-HF	68.0±20%	3.9	0.871	1.00	1.50	N/A
14	☐ DSE575047-101M-HF	100.0±20%	2.9	1.118	1.00	1.15	N/A
15	☐ DSE575047-151M-HF	150.0±20%	2.9	1.404	1.00	1.00	N/A
16	☐ DSE575047-221M-HF	220.0±20%	2.6	1.800	0.60	0.80	N/A
17	☐ DSE575047-331M-HF	330.0±20%	1.7	3.640	0.40	0.60	N/A
18	☐ DSE575047-471M-HF	470.0±20%	1.5	3.660	0.35	0.55	N/A
19	☐ DSE575047-681M-HF	680.0±20%	1.5	5.400	0.35	0.45	N/A
20	☐ DSE575047-102M-HF	1000.0±20%	0.85	5.680	0.24	0.30	N/A
21	☐ DSE575047-222M-HF	2200.0±20%	0.85	10.800	0.20	0.22	N/A

※Design as Customer's Requested Specifications. （可按顾客的特殊需求设计）

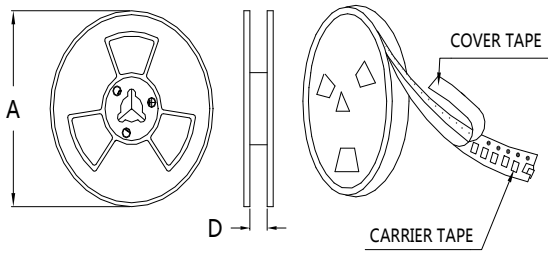
6. Structure (The structure of product.)



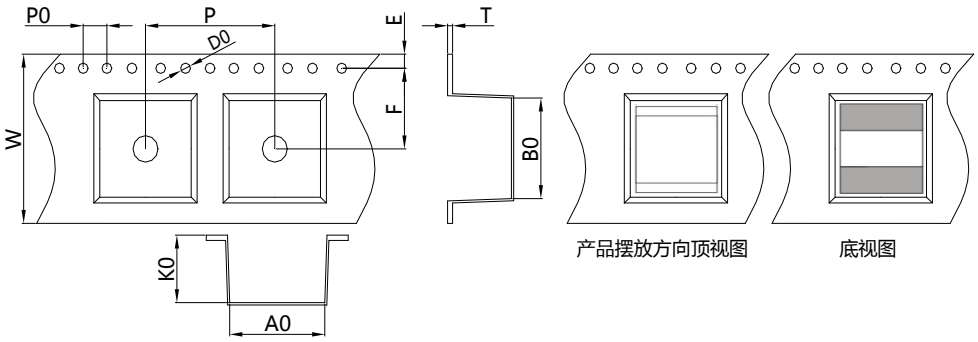
NO	Components	Material
①	Core	Ni-Zn Ferrite
②	Wire	Polyurethane system enameled copper wire
③	Magnetic Glue	Epoxy resin
④	Plating	AgNiSn or FeNiCu + Sn Alloy

7. PACKAGING(unit: mm)

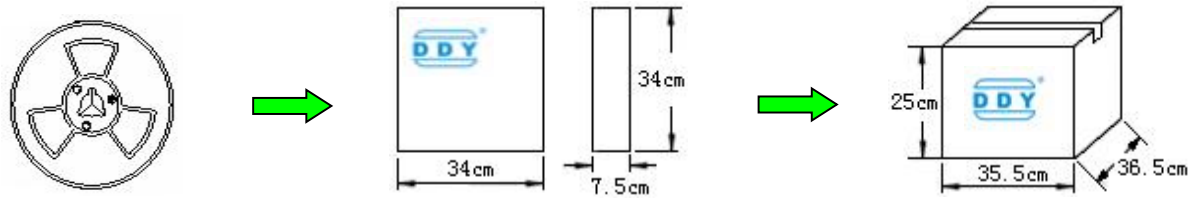
1.包装类型：编带装　　2.包装尺寸：　　☑ 13″ 盘　　☐ 7″ 盘



	13″ 盘	7″ 盘
A	Φ330±2.0	Φ178±2.0
D	12.5	



Size	Item	W	A0	B0	K0	P	T	E	F	D0	P0
575047	(mm)	12.0±0.3	6.0±0.3	5.3±0.3	5.0±0.2	8.0±0.3	0.4±0.1	1.75±0.1	5.5±0.1	1.5±0.1	4.0±0.2

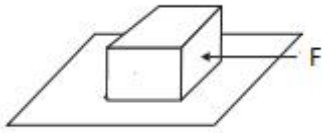


每卷	1500	Pcs

每盒	4卷,共	6000	Pcs

每箱	3盒,共	18000	Pcs

8. RELIABILITY TEST

No.	TEST ITEM	SPECIFICATION	TEST CONDITION
1	High temperature Storage test	1. No significant defects in appearance. 2.ΔL/L≦10% 3.ΔDCR/DCR≦10%	Temperature: 125℃±5℃ (N: Follow the product specification for the setting.) Time : 96±2 hours Place the samples for one hour at room temperature and test them within two hours
2	Low temperature Storage test	1. No significant defects in appearance. 2.ΔL/L≦10% 3.ΔDCR/DCR≦10%	Temperature: -40℃±5℃ (M: Follow the product specification for the setting) Time : 96±2 hours Place the samples for one hour at room temperature and test them within two hours.
3	Humidity test	1. No significant defects in appearance. 2.ΔL/L≦10% 3.ΔDCR/DCR≦10%	Temperature: 40±2℃ , Humidity: 93±3%RH Time : 96±2 hours Place the samples for one hour at room temperature and test them within two hours
4	Solderability test	Terminals must have 95% minimum solder coverage	1.Dip pads in flux then dip in solder pot at 245±5°C for 5 second. 2.Solder: lead free 3.Flux: rosin flux
5	Heat endurance of flow soldering	1. No significant defects in appearance. 2.ΔL/L≦10% 3.ΔDCR/DCR≦10%	1.Refer to the above reflow curve and go through the reflow for twice. 2.The peak temperature : 260+0/-5℃
6	Vibration test	1.No significant defects in appearance. 2.No short and no open.	Apply frequency 10~55~10Hz and amplitude 1.5mm, 1 min/cycle in X Y and Z direction for 2 hours each. (total 6 hours)
7	Terminal strength push test	1. Applied force:10N Duration: 10sec 2.Solder paste thickness:0.12mm 3.Meet the above requirements without any loose termina	Solder the test samples to the PCB through245 ℃ reflow, apply a standard force on the side of the test samples for 10 seconds. 

9. SOLDERING CONDITIONS

Applicable soldering process to the products is refl.

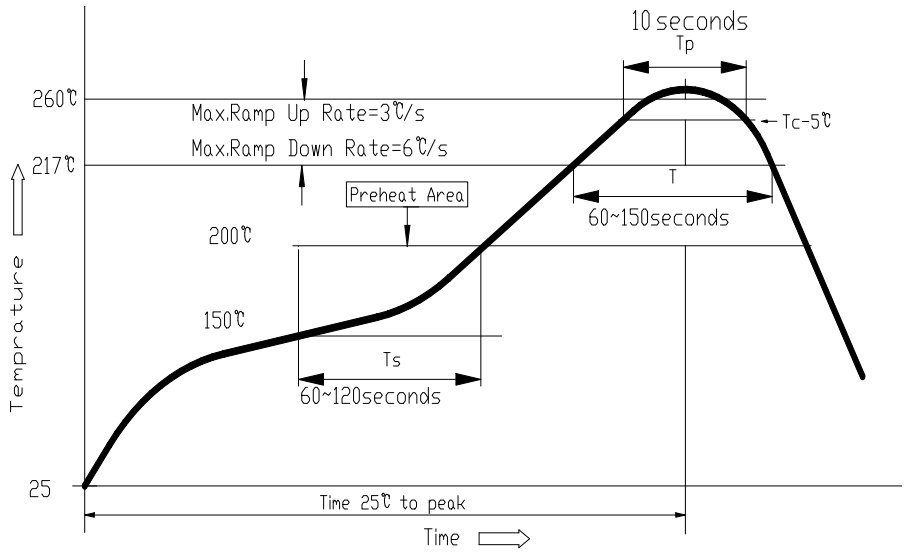
9.1 Soldering Materials

(1) Solder:Sn-3.0Ag-0.5Cu

(2) Flux:Use rosin-based flux,but not strongly acidic flux (with xhlorine exceeding 0.2wt%).Do not use water-soluble flux.

0.018

9.2 Reflow Soldering Profile



9.3 Soldering Iron

Reworking with electric solding iron must preheating at 150℃ for 1 minute is required,and do not directly touch the core with the tip of the soldering iron.The reworking soldering conditions are as follows.

①Temperature of soldering iron tip:350℃；

② Soldering iron power output:≤30W；

③ Diameter of soldering iron end:≤1.0mm；

④Soldering time:＜3 s