

SPECIFICATION FOR APPROVAL

SPEC NO : PDRC0810P1ET103KW12

CUSTOMER :

CUSTOMER PART NO :

PART NO : PDRC0810P1ET103KW12

QUANTITY : 5 PCS

DATE : 2023-7-14

REV NO : 1.0

CUSTOMER APPROVE

CUSTOMER SIGNATURE

Approved Rejected

R&D DEPARTMENT

PREPARED BY

CHECKED BY

APPROVED BY

Davy

Amanda

Vincent

Radial Inductor \ DRC Type

⊕ Feature

- Magnetically shielded with stand-off is incorporated to core body.
- Rugged reliability and performance fixed inductor.

⊕ Applications

Excellent as DC-DC converter boost or buck inductors. Also used for filtering applications.

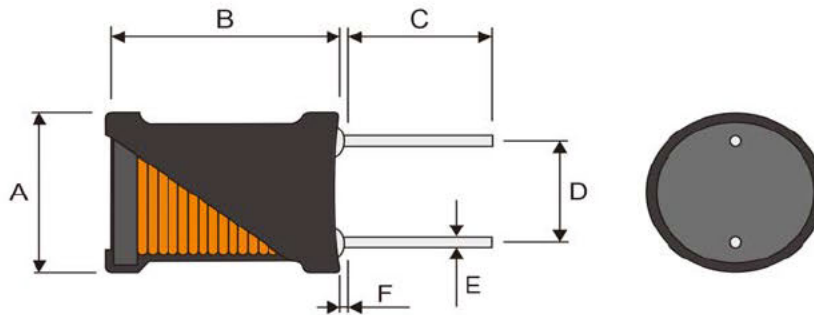
⊕ Product Identification :



Series name	Dimensions(ODxH)		Internal code	Inductance		Tolerance		Wire	
	0810	8.0*10.0mm		1R0	1 μH	J	5%	W12	0.12mm
PDRC	8.0*10.0mm		P1= 1 set of Wire ES= TUBE	100	10 μH	K	10%		
				101	100 μH	M	20%		
				102	1000 μH	N	30%		

PDRC0810P1ET103KW12

⊕ Shapes And Dimensions



Part No.	Dimensions(mm)						PIN			
	A	B	C	D						
PDRC0810P1ET103KW12	9.5	13.0	15.0	5.0	0.60					
	Max	Max	±2.0	±0.5	±0.1					

⊕ Electrical Characteristics :

Part No.	Inductance (mH)	Isat (A)		Irms (mA)		DCR (Ω)		Test Frequency
		0.07	0.10	-	-	20	16	
PDRC0810P1ET103KW12	10							1KHz/0.25V
	± 10%	Max	Typ	Max	Typ	Max	Typ	

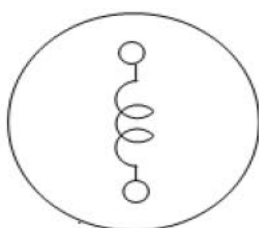
※Isat : DC Saturation Current that will cause initial inductance to drop approximately 10 % max.

※Irms : DC Current that will cause an approximate ΔT of 40°C.

※Test Instrument : L(CH1062/HP4284A) · DCR(TH2511/CH502BC) · Isat & Irms(WK3260B+WK3265B) or equivalent.

※All test data is referenced to 25°C ambient.

⊕ Equivalent Circuit Schematic :



⊕ Material List :

No.	Location	Material
1	Core	DR2W8X10
2	Wire	2UEW, 0.12*550TS(E344055)
3	Solder	Sn99.3 Cu0.7
4	Pin	CP-0.6mm
5	Tube	UL 9mm,130°C (E209436)

1.Operating temperature -25°C ~ +85°C

2.Storage conditions -25°C ~ +85°C

TEST DATA FOR PREPRODUCTION SAMPLES

Customer Test Date

2023-7-14

Part No. PDR0810P1ET103KW12 Sample Quantity 5 PCS

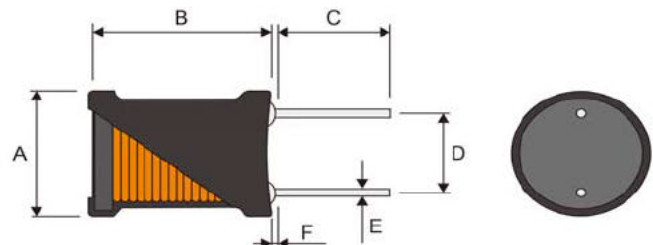
Lot No Test Temp 25°C Test Humidity 62%

MEAS Item	L (0A) (mH)	L (0.07A) (mH)	Tolerance	DCR (Ω)	A (mm)	B (mm)				
SPEC	10	L(0A)*90%	10%	20.00	9.50	13.00				
Upper	11	-	10%	20.00	9.50	13.00				
Lower	9	8	. -	1 -	-	-				
Tolerance	10%	Min	Max	Max	Max	Max				
Test Freq.	1KHz/0.25V									
1	10.51	OK		15.70	8.90	12.10				
2	10.45	OK		15.80	8.80	11.80				
3	10.43	OK		15.70	8.86	11.70				
4	10.55	OK		15.80	8.94	11.80				
5	10.48	OK		15.80	8.96	11.70				
6										
7										
8										
9										
10										
Average	10.48			15.760	8.89	11.82				
Max	10.55	0.00	0.00%	15.800	8.96	12.10				
Min	10.43	0.00	0.00%	15.700	8.80	11.70				
Range	0.12	0.00	0.00%	0.100	0.16	0.40				
StDevP	0.04	#DIV/0!	#DIV/0!	0.049	0.06	0.15				

Test Instrument

L HP4284A or equivalent.
 DCR CH502BC or equivalent. WK3260B
 Isat & Irms +WK3265B or equivalent.

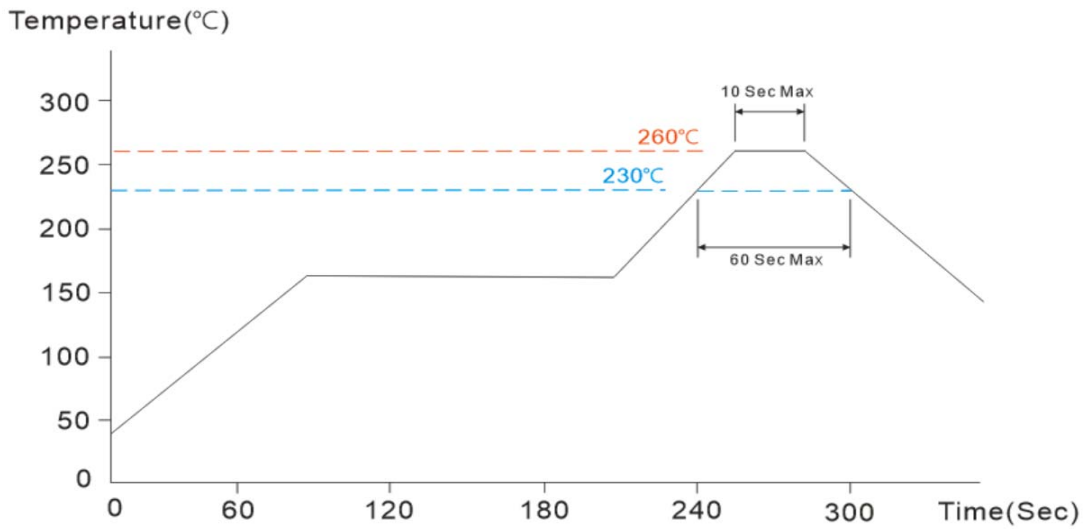
Configuration



Coil Spec :

Drawn by *davy* Checked by *amanda* Approved by *Vincent*

⊕ Reflow Soldering Heat Endurance

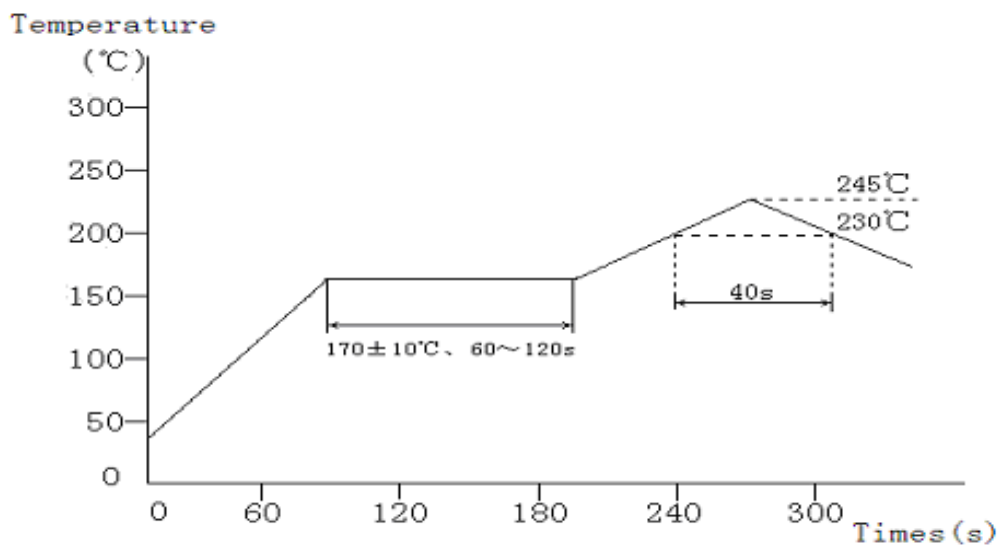


No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

The reflow test profile may vary with the testing instruments.

⊕ Recommended Reflow Conditions



The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.