深圳市佑驰电子有限公司

Specification for Approval

产品名称：T-core小颗系列

规格型号：HCTC-201210-XXX-M

产品编号：

日　　期：2026-1-20

1、本承认书的内容更改需经过双方确认，任一方单独的修改均视为无效。

2、本承认书在送达客户后，请给予承认并即签回，如无签回下订单的，我司有权以此承认书标准生产，并表示购买方默认许可。

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REVISION					
REV	DESCRIPTION	DATE	DESIGNED	CHECKED	APPROVED
A0	文件建立	2020/06/22	吕秀秀	Bowen	Darren

High Current, Power Inductors



Description

- Halogen Free
- 125°C maximum total temperature operation •
- Powder iron core material
- Magnetically shielded, low EMI
- High current carrying capacity, Low core losses
- Frequency range up to 5 MHz
- RoHS compliant

Applications

- Voltage Regulator Module (VRM)
- Multi-phase regulators
- Point-of-load modules
- Smart phone POL modules
- SSD modules
- Notebook regulators
- Battery power systems
- Graphics cards
- Data networking and storage systems

Environmental Data

- Storage temperature range: -55°C to +125 ° C
- Operating temperature range: -5 5 °C to +125 °C (ambient plus self-temperature rise)
- Solder reflow temperature: J- STD-020 D compliant

Packaging

- Supplied in tape and reel packaging.

Featurs

1. 1 Metal material for large current and low loss.

1.2 High performance (Isat) realized by metal dust core.

1 .3 Low loss realizedwith low Rdc.

1.4 Closed magnetic circuit design reduces leakage flux.

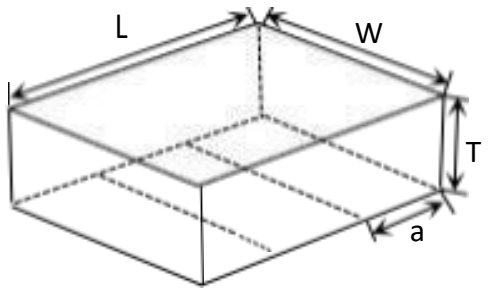
1 .5 Vinyl thermal spray, better surface compactness.

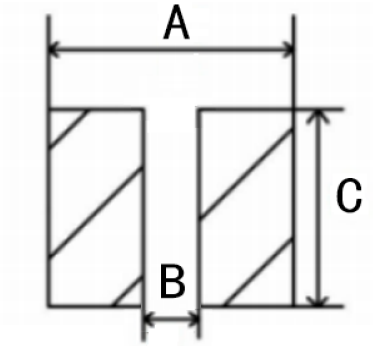
1 .6 Environmental requirements must comply with the QESP-44 document

1 . 7 100% lead (Pb) free meet RoHS2 .0 and Halogen ， Reach and other legal and regulatory requirements standard.

1． SHAPE AND DIMENSIONS

T-CORE 工艺大电流电感





单位： mm

产品系列	L	W	T	a	A	B	C
HCTC-201210	2.0±0.2	1.2±0.2	1 .00Max	0.75±0.2	2.10	0.50	1.30

2 ． Specificationss

HCTC-201210(2.0*1.2*1.0mm)

产品类别 单位	感值 μH	直流电阻 DCR(mΩ)		温升电流 Irm-(A)		饱和电流 I-a-(A)	
		-Typ.	Max.	-Typ.	Min.	-Typ.	Min.
HCTC-201210-R10-M	0.1	8.0	13	7.5	7.0	8.5	8.0
HCTC-201210-R22-M	0.22	16	22	7.1	6.5	7.3	6.8
HCTC-201210-R24-M	0.24	17	23	7.0	6.4	7.2	6.7
HCTC-201210-R33-M	0.33	24	32	5.5	5.0	6.5	6.0
HCTC-201210-R47-M	0.47	29	36	4.7	4.3	5.5	5.0
HCTC-201210-R68-M	0.68	37	43	4.3	4.0	5.0	4.5
HCTC-201210-1R0-M	1.0	55	63	3.9	3.5	4.0	3.5
HCTC-201210-1R5-M	1.5	76	85	3.1	2.6	3.2	2.7
HCTC-201210-2R2-M	2.2	135	150	2.0	1.7	2.7	2.4
HCTC-201210-6R8-M	6.8	440	520	15	1.3	1.45	1.2
HCTC-201210-100-M	10.0	600	660	1.1	1.0	1.2	1.0

Notes

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

2 . Operating temperature range - 55 ° C to + 125 ° C

3. Idc(A) : DC current (A) that will cause an approximate ΔT of 40 ° C (reference ambient temperature is 25 °C)

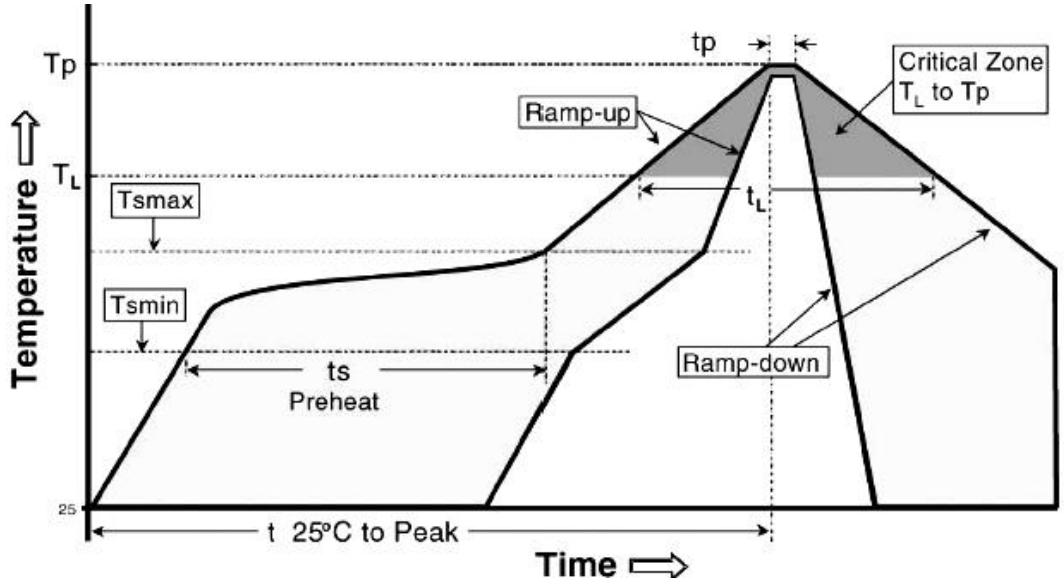
4. Isat(A) : DC current (A) that will cause L0 to dropapproximately30 %.5

. 50V DC shall be applied for 60s between the terminal and the Core

6.The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions . Circuit design , component placement , PWB trace size and thickness , airflow and other cooling provisions all affect the part temperature . Part temperature should be verified in the end application .

3. Soldering Condition

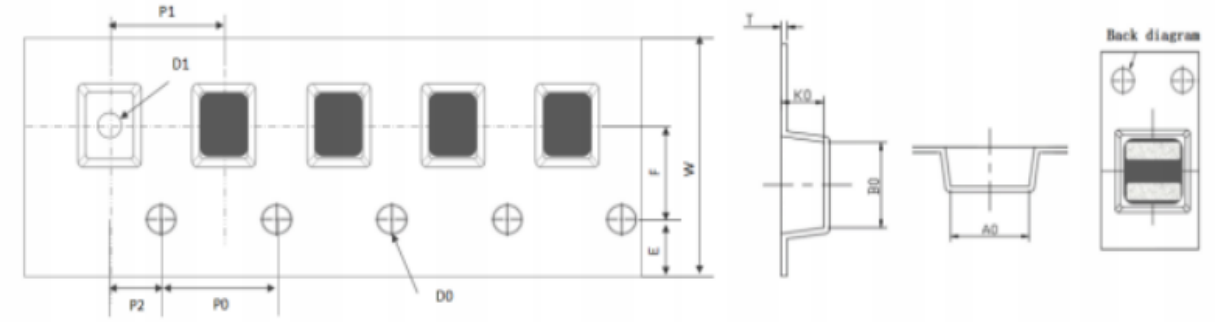
(This is for recommendation, please customer perform adjustment according to actual application) Recommend Reflow Soldering Profile：(solder : Sn96.5 / Ag3 / Cu0.5)



Profile Feature	Lead (Pb)-Free solder
Preheat： Temperature Min (Ts_{min}) Temperature Max (Ts_{max}) Time (Ts_{min} to Ts_{max}) (ts)	 150℃ 200℃ 60 -120 seconds
Average ramp-up rate： (Ts max to Tp)	3℃ / second max.
Time maintained above : Temperature (TL)Time (tL)	 217℃ 60-150 seconds
Peak Temperature (Tp)	260℃
Time within +0℃ of actual peak Temperature (tp)2 -5	10 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8minutes max.

4. Packing

The following dimensions are related to the actual fit of the machine，for reference only.



Series	W	A0	B0	D0	D1	E	F	K0	P0	P2	P1	T	Packing quantity
Tolerance	±0.10	±0.10	±0.10	+0.1/-0	±0.20	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.05	
201210	8.0	1.5	2.35	1.5	0.6	1.75	3.5	1.15	4.0	2.0	4.0	0.22	3K

Dimension of Reel：(Unit: mm)

Type	A ±2.0	B ±2.0	C ±2.0
All	178	60	13

