



南充新川电子科技有限公司

New Energy Technology Ltd.



产品承认书

SPECIFICATION FOR APPROVAL

客户名称

CUSTOMER NAME.

产品类型

Molding Power Inductors

PRODUCT TYPE

客户品名

CUSTOMER PN

新川料号

CMDA-2213□-□01A(SERIES)

NET P/N

文件编号

NET-WI-E-24122502

FILE NO.

客户承认/CUSTOMER ACCEPTED

承认 APPROVED	确认 CHECKED	承办 DESIGN
批注/REMARK		

批准 APPROVED	确认 CHECKED	作成 DESIGN
Justin	Anna	Stephanie

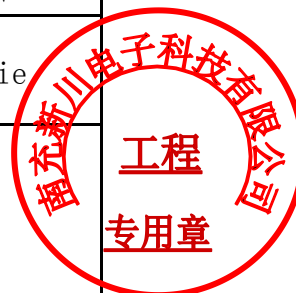
公司名称：南充新川电子科技有限公司

业务专线：0817-2999000/18681773180

公司网址：Http://www.net-tech.cn

邮箱：net@net-tech.cn

地址：四川省南充市顺庆区高新科技产业园区科技一路



产品承认书/SPECIFICATION FOR APPROVAL

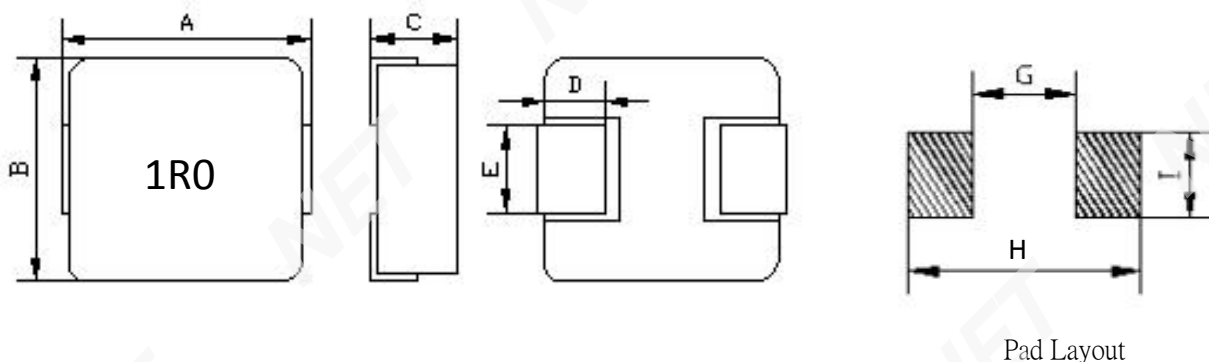
客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502

一、产品识别/PRODUCT IDENTIFICATION：

$\frac{\text{CMDA}}{(1)}$ — $\frac{2213}{(2)}$ $\frac{\square}{(3)}$ — $\frac{1R0}{(4)}$ $\frac{M}{(5)}$ — $\frac{\square}{(6)}$ $\frac{01}{(7)}$ $\frac{A}{(8)}$

- (1) Series CMDA代表合金；CMDC代表羰基；CXAL代表T-CORE
- (2) Dimensions:22.0*22.0*13.0
- (3) product appearance：F-框面；P-平面；K上框下平；
- (4) Inductance（R68=0.68 μ H 1R0=1.0 μ H 100=10 μ H 101=100 μ H）
- (5) TOL: M=±20% N=±30%
- (6) Special identification code
- (7) Marking
- (8) Packing

二、形状及尺寸/SHAPE AND DIMENSIONS（单位/Unit：mm）



A	B	C	D	E	G	H	I			
22.5±0.5	22.0 ±0.5	12.8±0.2	5.0±0.5	18.5Typ	12.2 Ref	23.3 Ref	19.6 Ref			

三、注意事项/NOTE：

1.印字颜色：黑色

四、电路图/CIRCUIT DIAGRAM



产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE O.	NET-WI-E-24122502

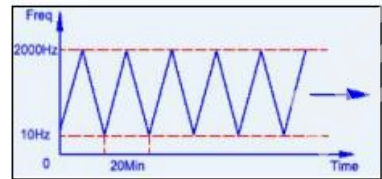
五.电气特性/ELECTRICAL CHARACTERISTIC

Part Number	Inductance (uH) ±20% 100KHz/1.0V	DCR (mΩ) Max.	I sat (A)Typ.	I rms (A)Max.	Marking
CMDA-2213□-R47M-□01A	0.47	0.67	100.00	80.00	R47
CMDA-2213□-1R0M-□01A	1.00	0.89	71.00	69.00	1R0
CMDA-2213□-2R2M-□01A	2.20	1.65	55.00	48.00	2R2
CMDA-2213□-6R8M-□01A	6.80	3.50	40.00	36.00	6R8
CMDA-2213□-8R2M-□01A	8.20	5.50	28.00	28.00	8R2
CMDA-2213□-100M-□01A	10.00	6.00	28.00	28.00	100
CMDA-2213□-150M-□01A	15.00	6.10	24.00	23.50	150
CMDA-2213□-220M-□01A	22.00	10.8(13)	16(20)	17.5(30)	220
CMDA-2213□-330M-□01A	33.00	15.40	17.50	15.50	330
CMDA-2213□-470M-□01A	47.00	20.00	15.00	13.50	470
CMDA-2213□-680M-□01A	68.00	32.35	14.00	12.00	680
CMDA-2213□-820M-□01A	82.00	40.00	9.00	10.20	820
CMDA-2213□-101M-□01A	100.00	45.00	7.00	9.10	101
CMDA-2213□-151M-□01A	150.00	90.00	8.00	6.00	151
CMDA-2213□-221M-□01A	220.00	130.00	6.00	4.50	221

- (1).I sat Curret: Temp.rise $\Delta L/L_{0A}$ 30% Typ
- (2).I rms Curret: Temp.rise 40°C Typ
- (3).Operatig Temperature: -40°C up to +125°C
- (4).Absolute maximum voltage 30VDC
- (5).Storage Temperature: 15°C up to 25°C, 65% RH max.

New Energy Technology Ltd.

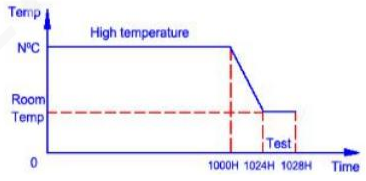
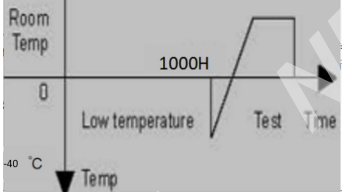
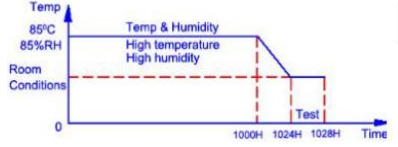
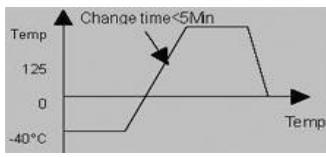
产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502
六.可靠性测试/RELIABILITY TESTING					
序号	Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)		
01	Solderability test Reference documents: MIL-STD-202G Method 208H IPC J-STD-002B 可焊性測試	Terminals area must have 95% min. Solder coverage 端子必須有95%以上著錫	Dip pads in flux then dip in solder pot at 260±5°C for 5 second. Solder:Lead free		
02	Operational Life Reference documents: MIL-PRF-27 (Sample Qty:77PCS) 工作寿命试验	1. 无明显的外观缺陷。 2. 感值变化符合在规格书范围内。 3. 直流电阻变化在规格书范围内。 1. No significant defects in appearance. 2. The change of inductance value is within the scope of specification. 3. The change of DC resistance is within the scope of specification.	1000 小时 105°C,如果 125°C 或 155°C 的产品,应在其温度下进行, 试验结束后 24±4 小时内进行测试。1000 hrs. @105°C. If 125°C or 155°C parts should be tested at the temperature specified. Measurement at 24±4 hours after test conclusion.		
03	Vibration test Reference documents: MIL-STD-202 Method 204 (Sample Qty:30PCS) 振動測試	1. 无明显的外观缺陷。 2. 感值变化符合在规格书范围内。 3. 直流电阻变化在规格书范围内。 1. No significant defects in appearance. 2. The change of inductance value is within the scope of specification. 3. The change of DC resistance is within the scope of specification.	测试频率從 10HZ 到 2000HZ, 5g 的力 20 分钟为一循环, XYZ 每个方向各 12 循环。 Test from 10-2000 Hz. 5g's for 20 minutes, 12 cycles each of 3 orientations . 		
04	Drop test Reference documents: MIL-STD-202G Method 203C 落下試驗	1.No case deformation or change in appearance. 2.ΔL/L≤10% 3.ΔDCR/DCR≤10%	Packaged & Drop down from 1m with 981m/s ² (100G) a ttitude ln 1 angle 1 ridges & 2 surfaces orientations. 將產品包裝後從 1 米高度自然落下至試驗板上		
05	Terminal Strength(SMD) Reference documents: AEC-Q200-006 (Sample Qty: 30 PCS) 端子強度試驗	无明显的外观缺陷。 No significant defects in appearance.	施加一个 17.7N (1.8kg) 的力到测试器件的侧面, 此外力的施加时间为 60+1 秒。apply a 17.7N (1.8Kg) force to the side of a device being tested. This force shall be applied for 60(+1) seconds. 		

产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502

六.可靠性测试/RELIABILITY TESTING

序号	Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
06	High Temperature Storage Reference documents: MIL-STD-202G Method 108 (Sample Qty:77PCS) 高溫儲存試驗	1. 无明显的外观缺陷。 2. 感值变化符合在规格书范围内。 3. 直流电阻变化在规格书范围内。 1. No significant defects in appearance. 2. The change of inductance value is within the scope of specification. 3. The change of DC resistance is within the scope of specification.	温度: N°C (N:依据产品规格设定) 在额定工作温度下放置器件1000 小时.例如:125°C的产品可以在 125°C下存储1000小时,同样地也适用于105°C和85°C的产品,不 通电.试验结束后24±4 小时内进行测试。 Temperature: N°C (N: Follow the product specification for the setting.)1000 hrs. at rated operating temperature(e.g.125°C part can be stored for 1000 hrs. @ 125°C. Same applies for105°C and 85°C.Unpowered. Measurement at 24±4 hours after test conclusion. 
07	Low temperature Storage test Referencedocuments: IEC 68-2-1A 6.1 6.2 低 溫儲存試驗	1.No case deformation or change in appearance. 2.ΔL/L≤10% 3.ΔDCR/DCR≤10%	Temperature: -40°C Time : 1000±2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature. 溫度: -40±2°C,時間:1000±2,小時 樣品在室溫下放置24小時,并进行測試。 
08	Biased Humidity Reference documents: MIL-STD-202G Method 103 (Sample Qty:77PCS) 高温高湿试验	1. 无明显的外观缺陷。 2. 感值变化符合在规格书范围内。 3. 直流电阻变化在规格书范围内。 1. No significant defects in appearance. 2. The change of inductance value is within the scope of specification. 3. The change of DC resistance is within the scope of specification.	在温度85°C/湿度85%的条件下放置1000 小时,不通电.试验结束 后24±4 小时内进行测试。 1000 hours 85°C/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion. 
09	Thermal shock test Reference documents: MIL-STD-202G Method 107G 熱衝擊測試	1.No case deformation or change in appearance. 2.ΔL/L≤10% 3.ΔDCR/DCR≤1	First -40°CforT time, last125°C T time as 1 cycle. Go through 20 cycles. 從-40°C作用T分鐘,然後溫度衝擊到125°C作用T分鐘, 作為一個循環,共作用20次。 

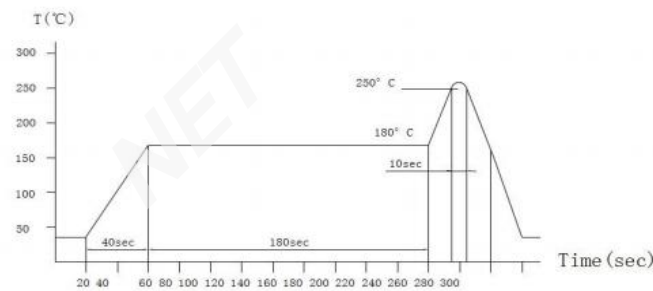
产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502

六.可靠性测试/RELIABILITY TESTING

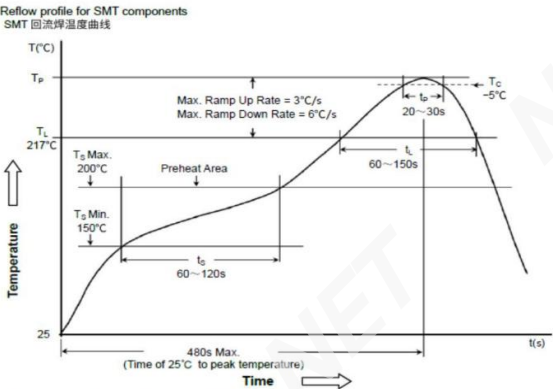
序号 焊接和安装Soldering and Mounting

(1).推荐回流焊条件（无铅）Recommended Reflow Conditions（Lead-free）



上面推荐的回流焊试验条件是根据本公司的回流焊设备
The above recommended reflow test conditions are based on the company's reflow welding equipment

(2). 回流焊耐热性Reflow Soldering Heat Endurance



	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm ³	350~2000 mm ³	>2000 mm ³
PB-Free Assembly 无铅装配	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

- a. 在该条件下进行回流焊，常温常湿条件下放置2个小时后，无机械，电气特性缺陷发生
Reflow soldering is carried out under this condition and placed under normal temperature and humidity conditions
- b. 在正常温湿度条件下，产品每过炉一次后需待产品冷却至常温后再进行二次过炉
Under normal temperature and humidity conditions, the product needs to be cooled to normal temperature after passing through the furnace for a second time.
- c. 回流焊曲线图会因设备的不同有所差异
The reflow test profile may vary with the testing instruments.

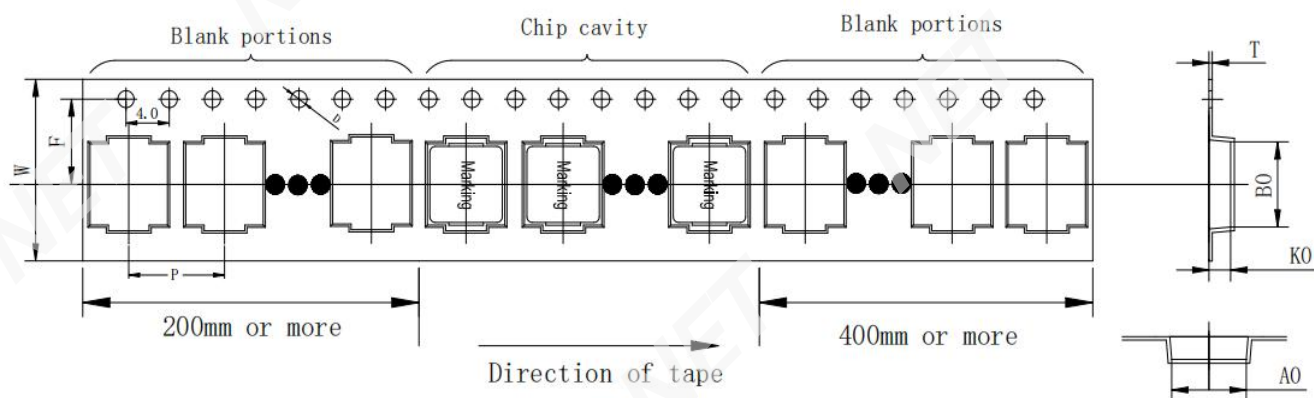
产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502

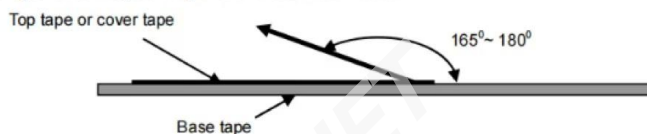
七.材料清单/MATERIAL LIST

NO.	ITEM	DESCRIPTION
1	CORE	Alloy powder
2	Coil	Polyamide-Imide Copper Wire(220℃)
3	CLIP	C1100/Sn/Ni
4	INK	BLACK

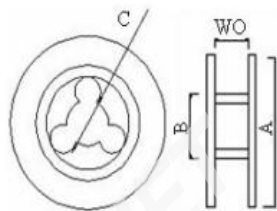
八.包装规格/PACKING SPECIFICATIONS



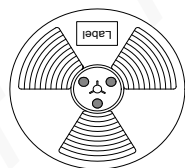
c. Peeling off force: 10gf to 130gf in the direction show below.



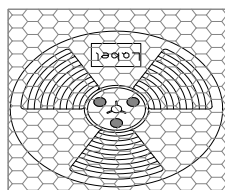
Transparent carrier and cover tape/透明载带和热封上带，预留前40CM后20CM.



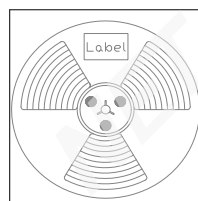
WO	A	B	C	W	P	Pull-of force
44±1.0	330±1.0	100±1.0	13.0±1.0	36mm	28mm	10~120g



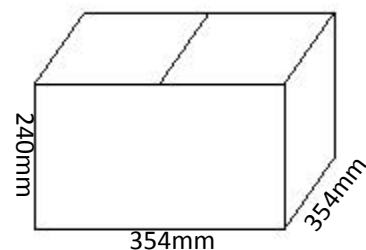
轮盘：13'(直径330mm)
数量：100PCS/盘



PE袋
数量：100PCS/袋



内盒
数量：100PCS/盒



外箱，数量：300PCS/箱
不足整箱用内盒或填充物装满

产品承认书/SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	-----	客户品名 CUSTOMER P/N	-----	版别 REV.	A0
产品类型 PRODUCT TYPE	Molding Power Inductors	新川品名 NET P/N	CMDA-2213□-□01A(SERIES)	文件编号 FILE NO.	NET-WI-E-24122502

Cautions and Warnings



提醒及警告

1. When the NET's products are used in occasions other than general electronic equipment, such as vehicle mounted, medical equipment, military, aerospace, etc., please be sure to contact the company's business department. In case of machine failure caused by exceeding the recommended use range of the company's products, the company will not bear relevant responsibilities
(新川此系列產品推荐使用范围：影音,家電,辦公自動化,通訊,電源模塊,LED照明,測量設備,機械工具等一般電子設備中.)

2. when the company's products are used outside the general electronic equipment, such as vehicle mounted, medical, military, aviation, aerospace and other environments, please contact the company's business department and put forward a request. Otherwise, the company will not bear any relevant responsibility for the machine failure caused by the use beyond the scope recommended by the company
(當本公司產品使用在一般電子設備以外,如:車載,醫療,軍用,航空,航天等环境时,請必須聯繫本公司營業部門并提出述求, 否则超出本公司推薦的使用范围而引起的機器故障,本公司不承擔任何相關責任.)

3. Please pay attention to the storage conditions that temperature: below 15-25℃ and humidity: 65% RH Max. If product is preserved for more than 6 months, the solderability of their terminals may be deteriorated.
(產品在規定的溫度和濕度條件下保存:溫度: 15-25℃ 以下, 濕度上限: 65% RH , 如果保存期超過半年, 端子的可焊性可能會變差.)