

SPECIFICATION FOR APPROVAL

CUSTOMER	_____
CUST. PART NO.	_____
CUST. DOC. REV.	_____
DESCRIPTION	CHIP INDUCTORS(RoHS+H.F.)
SAMPLE LOT NO.	_____
PART NO.	CF322522-XXXX-LRH
DOC. REV.	_____
DATE	_____

Once you approve this part, please sign and return this page to the following marked location.

Customer Signature: _____ Date: _____

This part currently development section. Production line can produce this series of products.

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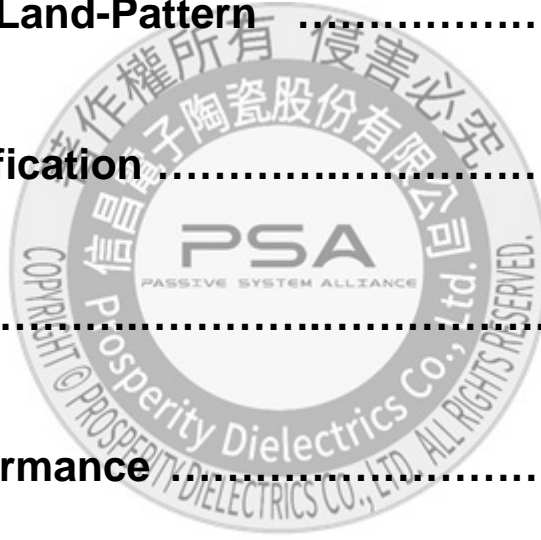
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CUSTOMER	CUSTOMER P/N	REV. -	SPL. LOT NO.	
PART NAME CHIP INDUCTORS (RoHS+H.F.)	PART NO. CF322522-XXXX-LRH	REV.	DATE OF ISSUE	Q'TY 0 PCS

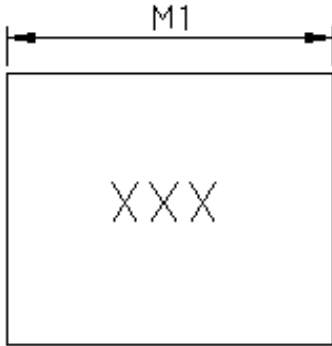
ENGINEERING CHANGE NOTICE – RECORD

REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
				

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✘ This is a RoHS and REACH compliant product whose related documents are available on request.
 ✘ Graphic is only for dimensionally application.

1. MECHANICAL DIMENSION



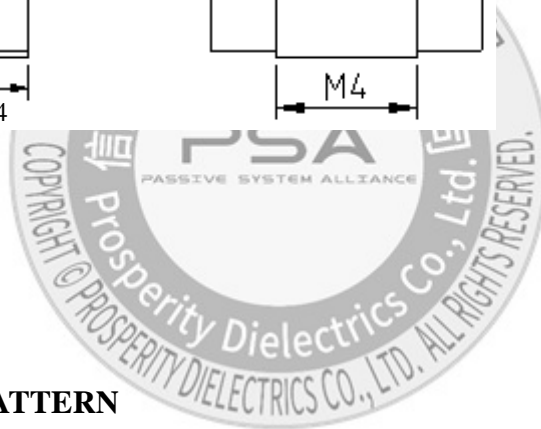
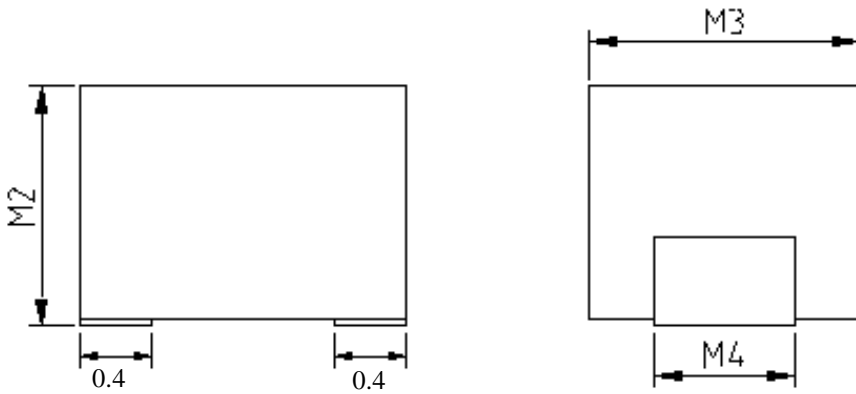
Marking:

R10J only Three digits

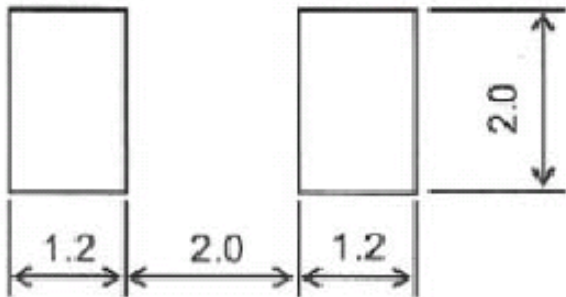
R12J~221J: Four digits

UNIT: mm

	DIM.	TOL.
M1	3.2	± 0.2
M2	2.2	± 0.2
M3	2.5	± 0.2
M4	1.9	± 0.1



2. RECOMMENDED LAND-PATTERN



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3. ELECTRICAL SPECIFICATION

Part Number	Inductance (uH)	Inductance Tolerance	Q (min)	Test Frequency (MHz)	SRF(MHz) (min)	DC Resistance (Ω) max	Rated Current (mA)
CF322522-R10□-LRH	0.10	J	28	100	700	0.44	450
CF322522-R12□-LRH	0.12	J	30	25.2	500	0.22	450
CF322522-R15□-LRH	0.15	J	30	25.2	450	0.25	450
CF322522-R18□-LRH	0.18	J	30	25.2	400	0.28	450
CF322522-R22□-LRH	0.22	J	30	25.2	350	0.32	450
CF322522-R27□-LRH	0.27	J	30	25.2	320	0.36	450
CF322522-R33□-LRH	0.33	J	30	25.2	300	0.40	450
CF322522-R39□-LRH	0.39	J	30	25.2	250	0.45	450
CF322522-R47□-LRH	0.47	J	30	25.2	220	0.50	450
CF322522-R56□-LRH	0.56	J	30	25.2	180	0.55	450
CF322522-R68□-LRH	0.68	J	30	25.2	160	0.60	450
CF322522-R82□-LRH	0.82	J	30	25.2	140	0.65	450
CF322522-1R0□-LRH	1.0	J	30	7.96	120	0.70	400
CF322522-1R2□-LRH	1.2	J	30	7.96	100	0.75	390
CF322522-1R5□-LRH	1.5	J	30	7.96	85	0.85	370
CF322522-1R8□-LRH	1.8	J	30	7.96	80	0.90	350
CF322522-2R2□-LRH	2.2	J	30	7.96	75	1.00	320
CF322522-2R7□-LRH	2.7	J	30	7.96	70	1.10	290
CF322522-3R3□-LRH	3.3	J	30	7.96	60	1.20	260
CF322522-3R9□-LRH	3.9	J	30	7.96	55	1.30	250
CF322522-4R7□-LRH	4.7	J	30	7.96	50	1.50	220
CF322522-5R6□-LRH	5.6	J	30	7.96	45	1.60	200
CF322522-6R8□-LRH	6.8	J	30	7.96	40	1.80	180
CF322522-8R2□-LRH	8.2	J	30	7.96	35	2.00	170
CF322522-100□-LRH	10.0	J	30	2.52	30	2.10	150
CF322522-120□-LRH	12.0	J	30	2.52	20	2.50	140
CF322522-150□-LRH	15.0	J	30	2.52	20	2.80	130
CF322522-180□-LRH	18.0	J	30	2.52	20	3.30	120
CF322522-220□-LRH	22.0	J	30	2.52	20	3.70	110
CF322522-270□-LRH	27.0	J	30	2.52	20	5.00	80
CF322522-330□-LRH	33.0	J	30	2.52	17	5.60	70
CF322522-390□-LRH	39.0	J	30	2.52	16	6.40	65
CF322522-470□-LRH	47.0	J	30	2.52	15	7.00	60
CF322522-560□-LRH	56.0	J	30	2.52	13	8.00	55
CF322522-680□-LRH	68.0	J	30	2.52	12	9.00	50
CF322522-820□-LRH	82.0	J	30	2.52	11	10.00	45
CF322522-101□-LRH	100	J	20	0.796	10	10.00	40
CF322522-121□-LRH	120	J	20	0.796	10	11.00	70
CF322522-151□-LRH	150	J	20	0.796	8	15.00	65
CF322522-181□-LRH	180	J	20	0.796	7	17.00	60
CF322522-221□-LRH	220	J	20	0.796	7	21.00	50
CF322522-331□-LRH	330	J	20	0.796	5	34.00	40

TEST INSTRUMENTS : HP4285A & CHROMA-16502

NOTE:

1. OPERATING TEMPERATURE RANGE : -40°C~+125°C
2. STORAGE TEMPERATURE RANGE : -40°C~+100°C
3. MSL : LEVEL 1
4. TOLERANCE : J=±5%

4. MATERIAL LIST

WIRE : ENAMELLED COPPER WIRE

CORE : FERRITE DR CORE

TERMINAL : TINNED COPPER FLAT

ENCAPSULATE : EPOXY NOVOLAC MOLDING COMPOUND

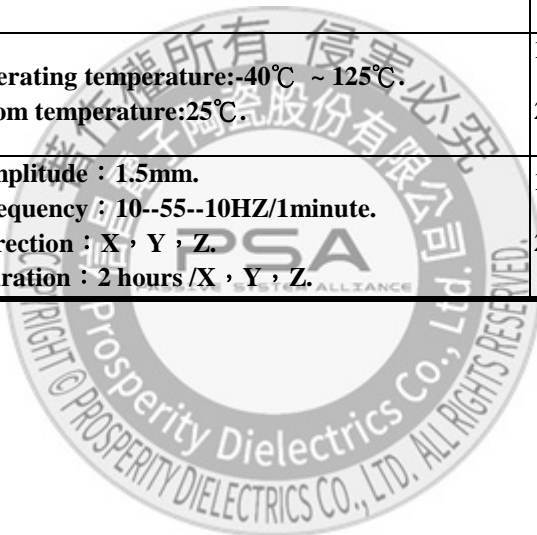
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5. RELIABILITY PERFORMANCE

Test Item	Test Condition	Specification
1.High Temperature Exposure	1.Temperature: 125±2°C. 2.Time: 96±2hours.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
2.Temperature Cycling	1.Temperature: -40°C~ +125°C. 2. Cycles: 50. 3. Dwell time: 30 minutes.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
3.Biased Humidity	1.Temperature: 40±2°C. 2.Humidity: 90~95%RH. 3.Time: 96±2 hours.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
4.Operational Life	1.Temperature: 125±2°C. 2.Time: 1000±12 hours. 3.Isat: 0.45A.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
5.Resistance To Solvents	Immerse into solvent for 3+0.5/-0 minutes&brush 10 times for three cycles.	1.No body deformation change in appearance or obliteration of marking. 2.Inductance shall not change more than ±10%.
6.Resistance To Soldering Heat	1.Peak temperature : 250.0~250.3°C. 2.Time(temp. ≥ 217°C): 86~88second. 3.IR reflow times: 3 times.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
7.Solderability	1. Baking in pre-testing: 150±5°C/4Hours±30 min. 2. After fluxing,inductor shall be dipped in a melted solder pot at 235±5°C for 5±0.5 seconds.	The terminal shall be at least 95% covered with fresh solder.
8.Terminal Strength	1. A 0.5kg load shall be applied to both terminals in the axis direction for 1 minute.	Terminal shall not be loosened or ruptured.
9.Cold	1.Temperature: -40±2°C. 2.Time: 96±2hours.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
10.Humidity Load Life	1.Temperature: 40±2°C. 2.Humidity: 90~95%RH. 3.Time: 1000±12 hours. 4.Isat: 0.45A.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
11.Rated Current	1. Applied IDC current to chip inductor. 2. Test time: 5 seconds. 3.Isat: 0.45A.	Inductance change shall be 10% max to initial value.

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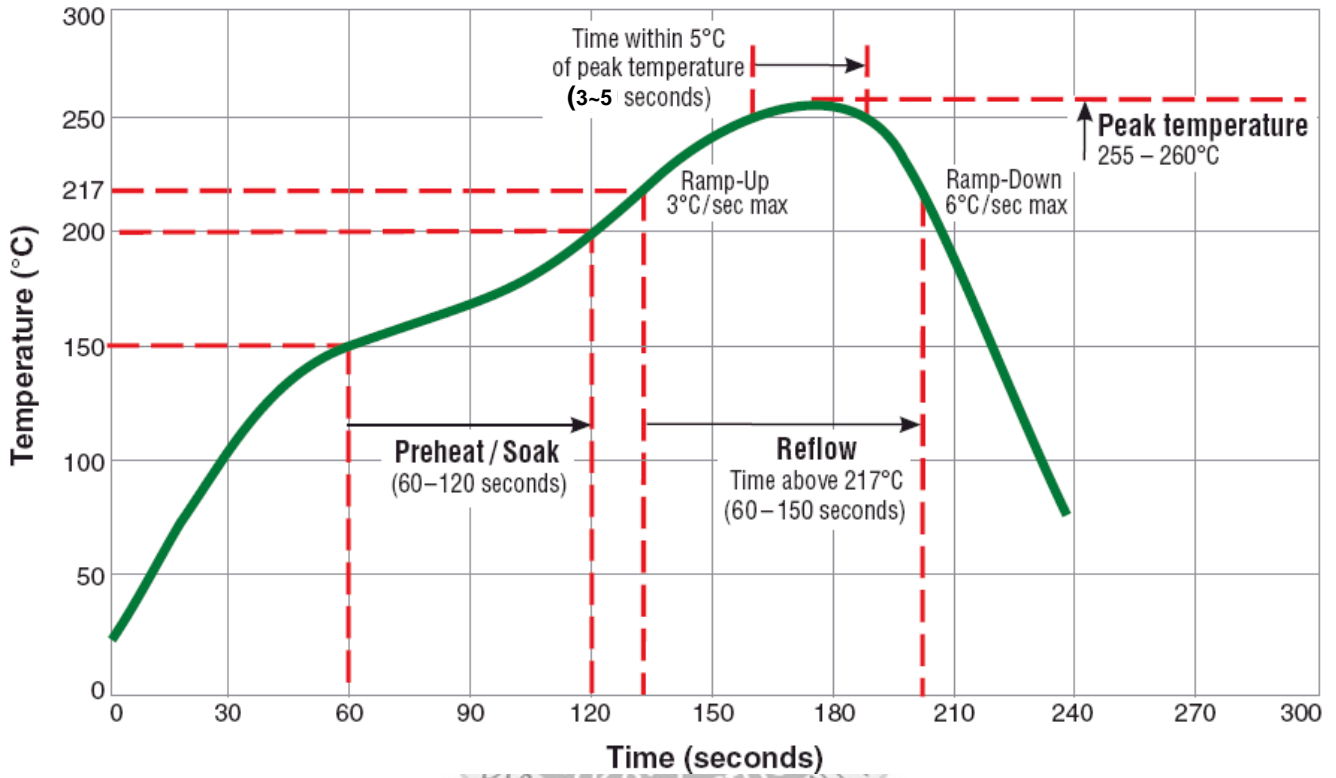
Test Item	Test Condition	Specification
12.Over Load	1. Applied double current of IDC to inductor for a period of 5 minutes.	After test , inductors shall be no electrical and mechanical damage.
13.Temperature Rise	1.Applied DC current (IDC) to chip inductor.Temperature measure by digital surface thermometer. 2.Test time: 10 minutes.	Temperature rise shall be 20°C max.
14.Withstanding Voltage	AC voltage 1000V、3mA applied between inductors terminal and coating for 5 seconds.	After test , inductors shall be no electrical and surface damage.
15.Insulation Resistance	DC voltage 100V applied between inductor terminal and coating for 1 minute.	1.After testing , inductors shall be no electrical and mechanical damage. 2. 1000MΩ Min.
16.Drop	Inductors shall be dropped 10 times from a height of 1M onto 3 cm wooden board.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
17.Electrical Characterization	1.Operating temperature:-40°C ~ 125°C. 2.Room temperature:25°C.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
18.Vibration	1. Amplitude : 1.5mm. 2. Frequency : 10--55--10HZ/1minute. 3. Direction : X , Y , Z. 4. Duration : 2 hours /X , Y , Z.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.



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6. TYPICAL RoHS REFLOW PROFILE

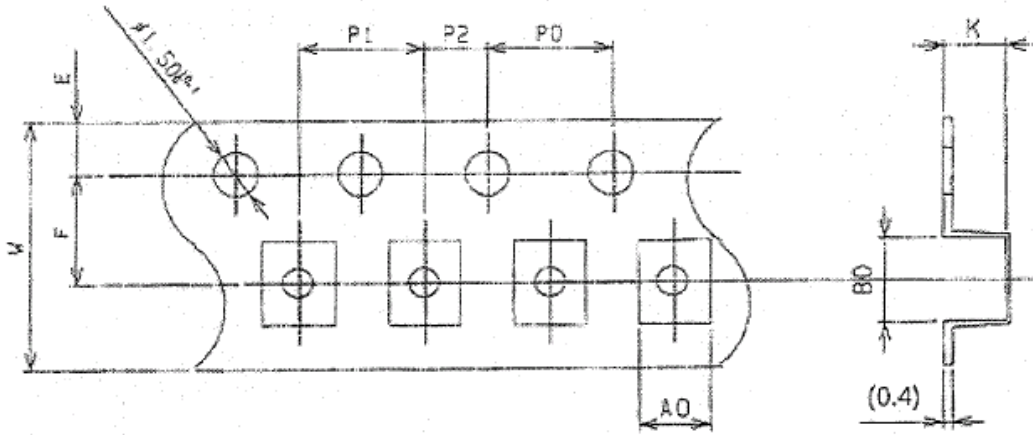
Typical RoHS Reflow Profile



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7. PACKING

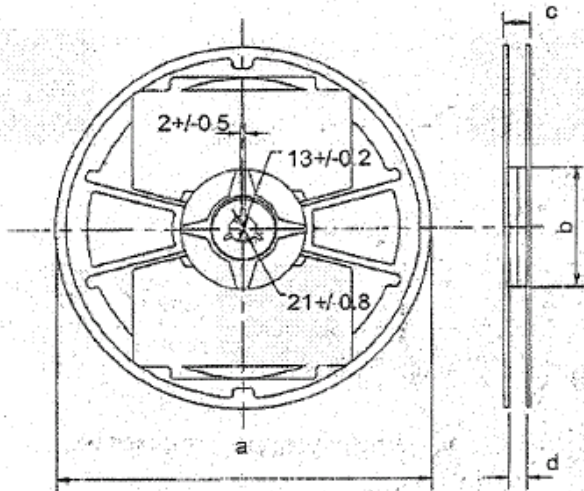
7.1 Dimensions of emboss carrier tape.



UNIT : mm

	A	B	C	W	F	E	P0	P1	P2
DIM.	2.80	3.50	2.30	8.0 ±0.3	3.5 ±0.05	1.75 ±0.1	4.0 ±0.1	4.0 ±0.1	2.0 ±0.05

7.2 Dimensions of the reel.



	Dimension
a	180+0/-3 mm
b	60+1/-0 mm
c	13+/-1.4 mm
d	9.0+/-0.3 mm

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7.3.Packaging

Outer Box	Reel number	Dimension A	Dimension B	Dimension C
Type A	2 reel Max.	185 mm	195 mm	35 mm
Type B	4reel Max.	185 mm	195 mm	60 mm
Type C	5 reel Max.	185 mm	195 mm	80 mm
Type D	10 reel Max.	185 mm	195 mm	155 mm

