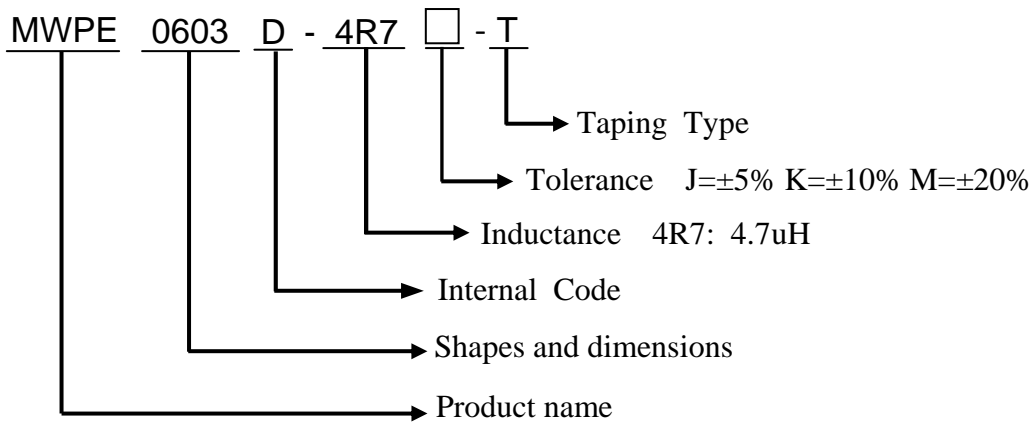


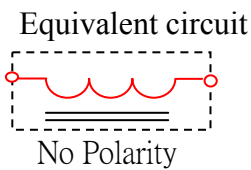
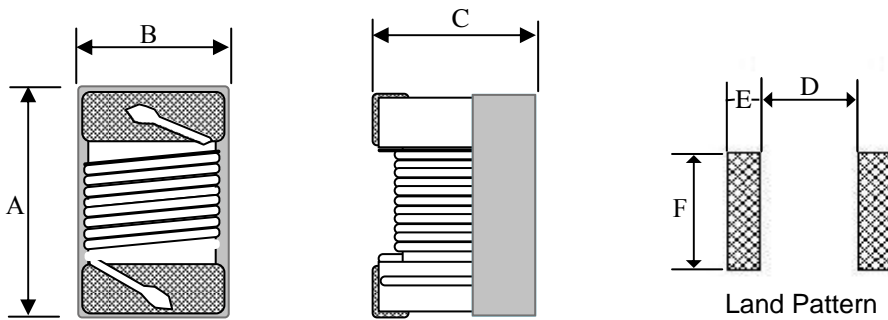
1. Scope

This specification applies wire wound power inductors MWPE0603D-4R7K-T to be delivered to user.

2. Product Identification



3. Shapes and Dimensions



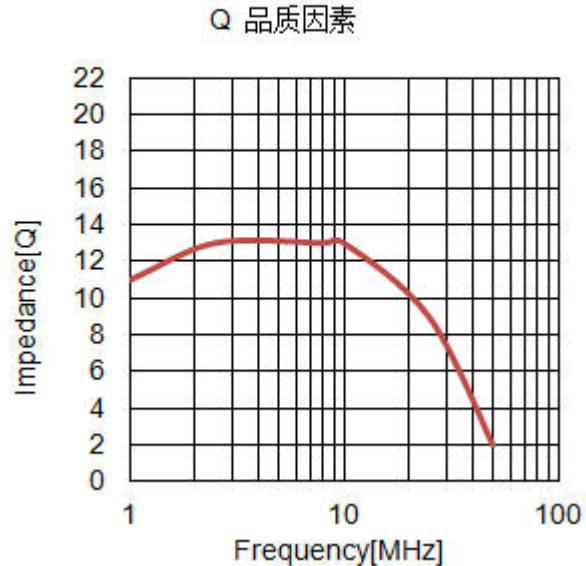
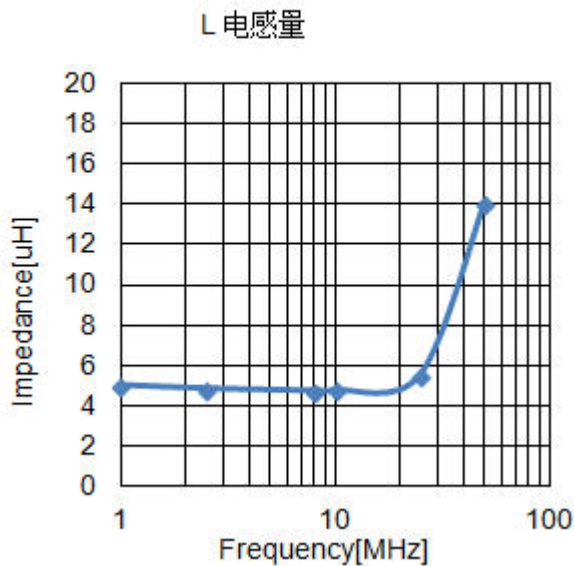
- A max. : 1.80 mm
- B max. : 1.20 mm
- C max. : 1.20 mm
- D ref. : 0.64 mm
- E ref. : 0.64 mm
- F ref. : 1.02 mm

4. Test Instruments

ITEM	SPEC. RANGE	TEST FREQ.	TEST INSTRUMENTS
L (μH)	4.7 \pm 10%	7.9 MHz	HP4286A
Q(品质系数)	12 MIN	7.9 MHz	
DCR (Ω)	1.26 MAX		502BC
Irms (mA)	400 MAX		VR116+VR7210
SRF (MHz)	51 MIN		E5071C ENA

- Storage temp.: -40°C ~ +85°C, R.H.: 30% ~ 70%, Operating temp.: -40°C ~ +85°C
- Moisture sensitivity level (MSL) 2 (1 year floor life at < 30°C/85% relative humidity).
- Failures in time(FIT)/Mean Time Between Failures(MTBF) 38 per billion hours/26,315,789 hours, calculated per Telcordia SR-332.

5. Electrical Characteristics

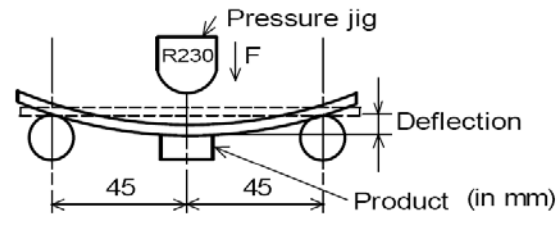


6. Test Data For Samples

TEST ITEM	L	Q(品质系数)	DCR	A	B	C
	(μ H)	(min)	(Ω)	(mm)	(mm)	(mm)
CON.	7.9MHz	7.9MHz	At 25°C	1.8MAX	1.2MAX	1.2MAX
SPEC.	4.7 \pm 10%	12 MIN	1.26 MAX			
1	4.72	16.0	0.79	1.71	1.16	1.11
2	4.69	18.0	0.81	1.69	1.15	1.13
3	4.71	17.0	0.80	1.72	1.17	1.12
4	4.68	16.0	0.79	1.71	1.17	1.13
5	4.70	16.0	0.79	1.71	1.15	1.11
6	4.69	18.0	0.81	1.69	1.16	1.13
7	4.68	17.0	0.80	1.72	1.17	1.12
8	4.68	16.0	0.79	1.70	1.15	1.11
9	4.70	18.0	0.81	1.71	1.16	1.12
10	4.71	17.0	0.80	1.69	1.17	1.13
X	4.70	16.90	0.80	1.71	1.16	1.12

7. Reliability Test

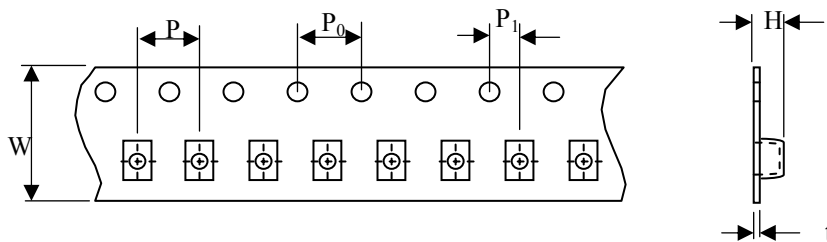
TEST ITEM	SPECIFICATION	TEST CONDITION
Rating current	According to product specifications	Current sources:33010D
Inductance	According to product specifications	Test Frequency:0.252~250MHz Test Equipment:HP4291A HP4286A HP4287A HP4284A Test Fixture:16193Aor16334A
Q	According to product specifications	Test Frequency:0.252~1500MHz Test Equipment:HP4291A HP4286A HP4287A , Test Fixture:16193A or 16334A
RDC	According to product specifications	Test Equipment:HP4263B
SRF	According to product specifications	Test Equipment:HP4291A Test Fixture:16193A
Solderability	The metalized area must have more then 90%of solder coverage	Soldering Temp:230±5℃ Dipping time:5±1S
Resistance to soldering heat	No evidence of mechanical damage, The mealized arer must have more then 75% of solder coverage . Inductance change less than ±5% Q change less than ±10% .	Soldering Temp:260±5℃ Dipping time:10±1S
Thermal Shock	No evidence of mechanical damage,Inductance change less than±5%, Q change less than±10%	A cycle contain: Step 1: -40℃ ,30Min Step 2: 85℃ , 30Min Cycle Times:10

TEST ITEM	SPECIFICATION	TEST CONDITION
High Temperature Storage	No evidence of mechanical damage, Inductance change less than $\pm 5\%$, Q change less than $\pm 10\%$	Test Temperature: $125\pm 2^{\circ}\text{C}$ (Ceramic core) $85\pm 2^{\circ}\text{C}$ (Ferrite core) Test Time: 96 ± 2 Hours
Low Temperature Storage	No evidence of mechanical damage, Inductance change less than $\pm 5\%$, Q change less than $\pm 10\%$	Test Temperature: $-40\pm 2^{\circ}\text{C}$ Test Time: 96 ± 2 Hours
Moisture Resistance	No evidence of mechanical damage, Inductance change less than $\pm 5\%$, Q change less than $\pm 10\%$	Test Temperature: $50\pm 2^{\circ}\text{C}$ Test Time:100Hours relative humidity:90~95%
Vibration	No evidence of mechanical damage, Inductance change less than $\pm 5\%$, Q change less than $\pm 10\%$	Amplitude: 1.5mm X Y、Z each direction for 1Hour and 45min Frequency range: $10\sim 55\sim 10\text{Hz}$ (min)
Component Adhesion	No evidence of mechanical damage , No evidence of peel off or broken , keep continuity of Winding	Force:2Kg Test Time: 5 ± 1 sec
Resistance to bend	No evidence of mechanical damage	Camber:20mm Test Board:Glass-Epoxy board Thickness:8mm 
Life	No evidence of mechanical damage, Inductance change less than $\pm 5\%$, Q change less than $\pm 10\%$	Test Temperature: $85\pm 2^{\circ}\text{C}$ Test Time:1000Hours with rating current

8. Packaging

The packaging must be done not to receive any damage during transporting and storing.

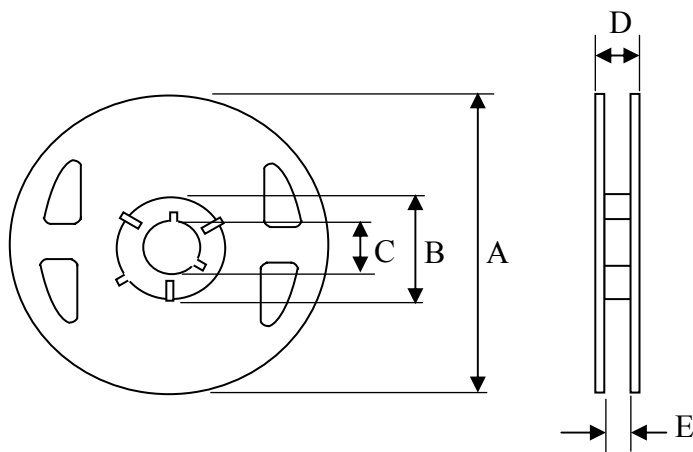
8-1 Tape dimensions



(Dimensions in mm)

Symbol	W	P	P ₀	P ₁	H	t
Dimension	8	2	4	2	2.0	0.23

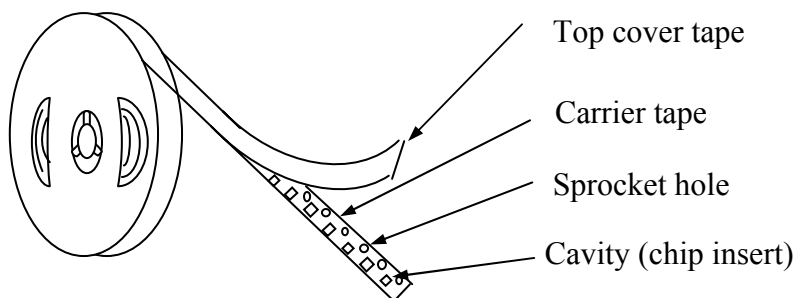
8-2 Reel dimensions



(Dimensions in mm)

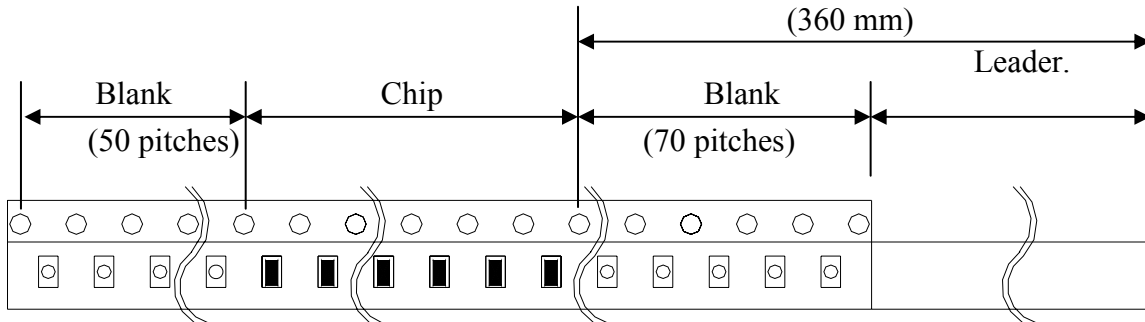
Symbol	T
A	178
B	60
C	13
D	14.4
E	10

8-3 Tapping figure



8-4 Packaging Form

There shall not continuation more than two vacancies of the product.



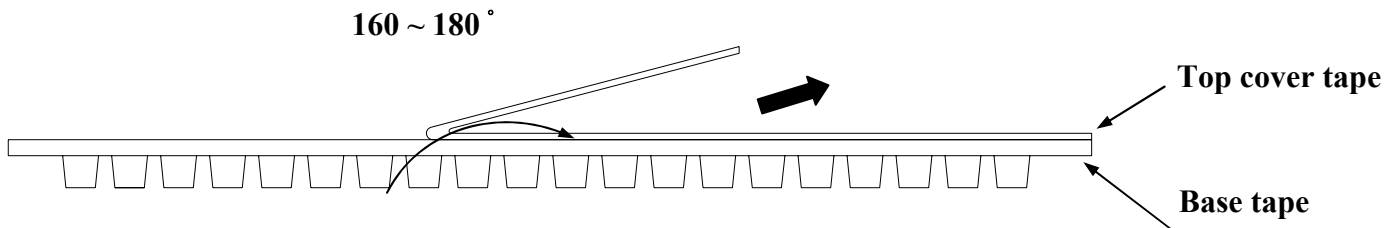
8-5 Cover Tape Peel Strength

The force for tearing off cover tape is 0.1~0.6(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa

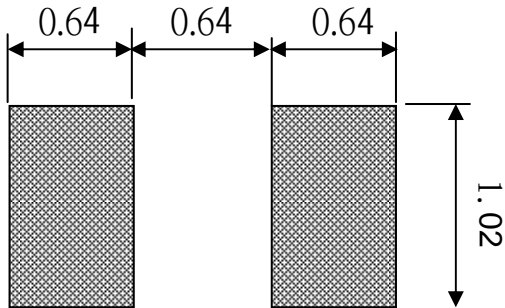


8-6 Packing Quantity

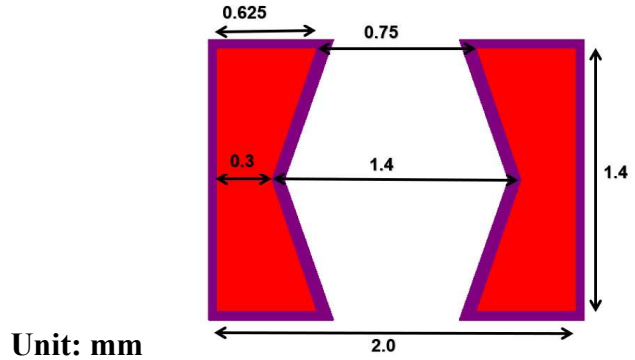
φ180 mm reel type : 2,000 pcs./reel

9. Recommended Soldering Conditions (Please use this product by reflow soldering)

9-1 Recommended Footprint

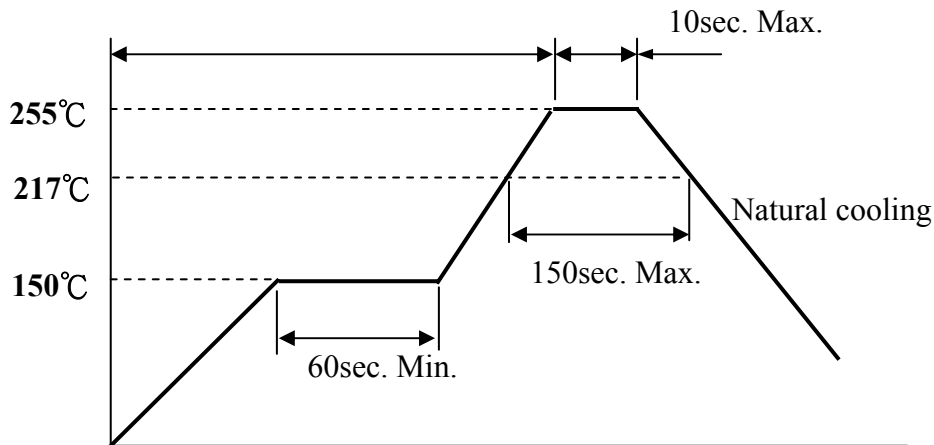


paste mask layer recommendation:



9-2 Recommended Reflow Pattern

Reflow at 260°C/3 Cycles



9-3 Iron Soldering

Use a solder iron of less than 30W when soldering ,do not allow the soldering iron tip directly touch the Ceramic body outside of terminal electrode.
4 seconds max. at 260°C

10. Attention in Case of Using

In case of using product ,please avoid following matters:

- Splashing water or salt water
- Dew condens
- Toxic gas (Hydrogen sulfide, Sulfurous acid ,Chlorine, Ammonia)
- Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.

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