

Product Information

Control No. : ARP-4912000-D 1

Issued on April 25, 2024

Measured data

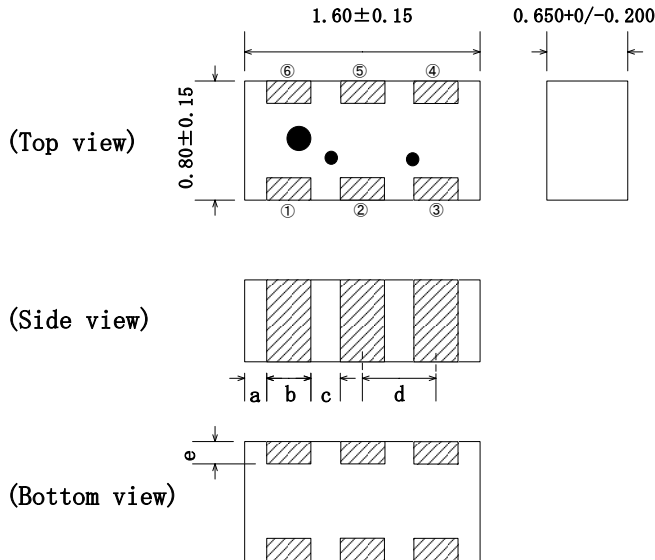
RoHS Compliant Part

AEC-Q200 Compliant Part

1. Type No.

HMD9120E

2. Dimension (Unit : mm)



Terminal	
①	GND
②	Common
③	GND
④	Band2(Lo)
⑤	GND
⑥	Band1(Hi)

Terminal Dimensions	
a	0.15 +/- 0.15
b	0.30 +/- 0.10
c	0.20 +/- 0.10
d	0.50 +/- 0.10
e	0.15 +/- 0.10

3. Electrical characteristics

Band1

Parameter	Specification	Typical	Unit	Remark
fc1 (Center frequency)	5000	-	MHz	
fc1 Pass band frequency	4900-5100	-	MHz	
fc2 (Center frequency)	5550	-	MHz	
fc2 Pass band frequency	5150-5950	-	MHz	
Nominal impedance	50	-	ohm	
fc1 Insertion Loss at 25degC.	1.3 Max.	0.73	dB	
fc1 Insertion Loss at -40 to +125degC.	1.5 Max.	-	dB	
fc1 Common port return loss in BW	10 Min.	15.4	dB	
fc1 Band2 port return loss in BW	10 Min.	14.5	dB	
fc2 Insertion Loss at 25degC.	1.0 Max.	0.65	dB	
fc2 Insertion Loss at -40 to +125degC.	1.2 Max.	-	dB	
fc2 Common port return loss in BW	10 Min.	16.9	dB	
fc2 Band2 port return loss in BW	10 Min.	15.7	dB	
Attenuation (MHz)	at 2400 - 2500	38 Min.	41.1	dB
	at 7000	2.0 Min.	2.5	dB
	at 10300 - 11700	12 Min.	13.3	dB
	at 15300 - 16200	15 Min.	31.0	dB

Band2

Parameter	Specification	Typical	Unit	Remark
fc (Center frequency)	2450	-	MHz	
Pass band frequency	2400-2500	-	MHz	
Nominal impedance	50	-	ohm	
Insertion Loss at -40 to +125degC.	0.7 Max.	0.35	dB	
Common port return loss in BW	10 Min.	17.6	dB	
Band1 Port Return Loss in BW	10 Min.	17.3	dB	
Attenuation (MHz)	at 4800 - 5000	22 Min.	31.5	dB
	at 7200 - 7500	20 Min.	30.7	dB

Isolation

Parameter	Specification	Typical	Unit	Remark
Isolation (MHz)	at 2400 - 2500	38 Min.	40.7	dB
	at 4900 - 5000	22 Min.	36.3	dB
	at 5150 - 5950	30 Min.	39.5	dB

Approved by

Y.Imai

Confirmed by

S.Suzuki

Raised by

R.Takahashi

SOSHIN ELECTRIC CO., LTD

4. Note

4.1 Operating Temperature Range

: -40 to +125 deg C.

4.2 Storage Temperature Range before soldering in taping package

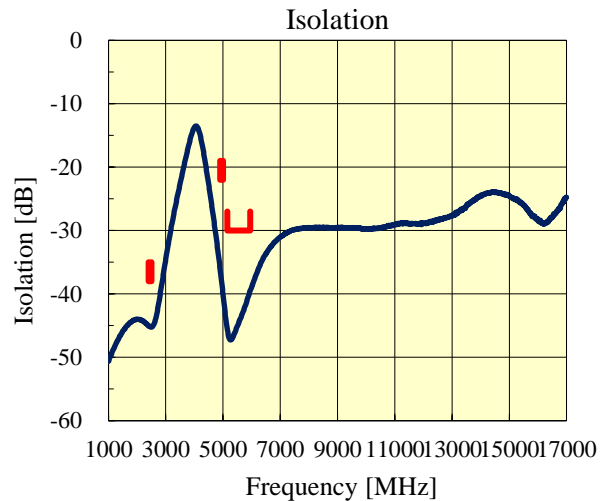
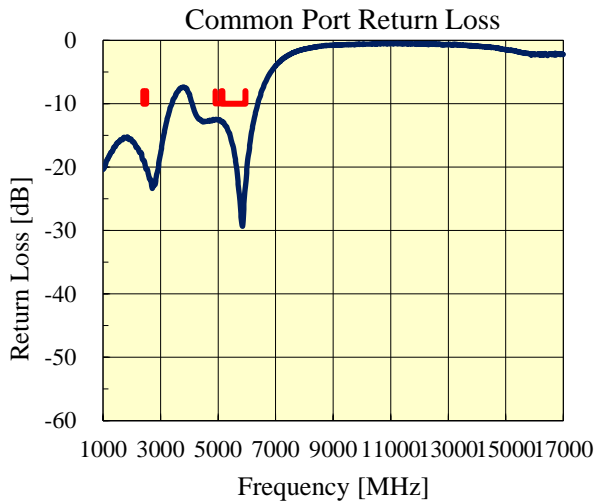
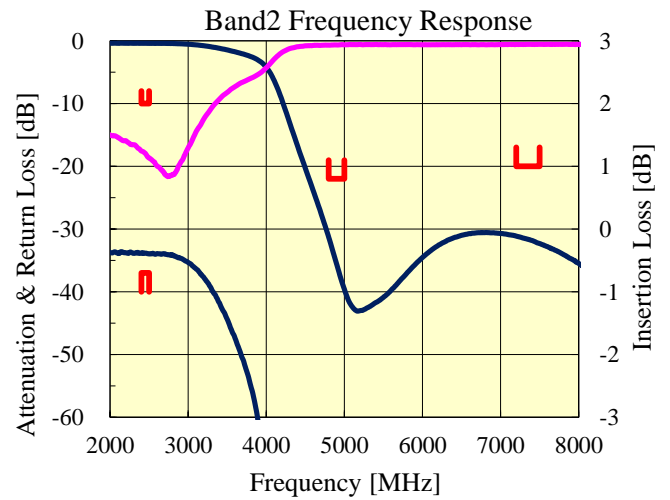
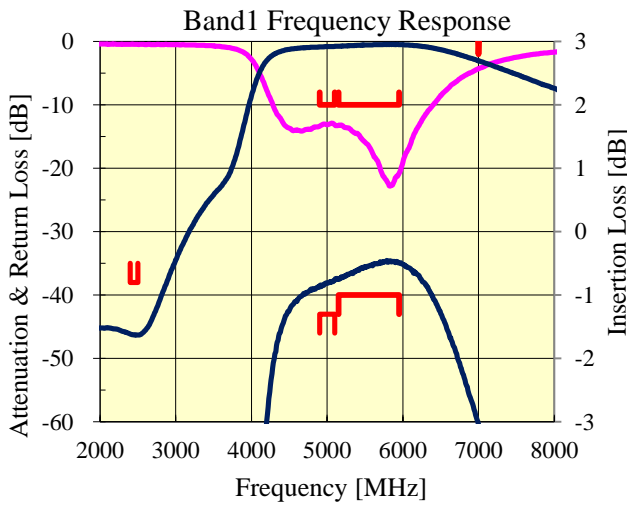
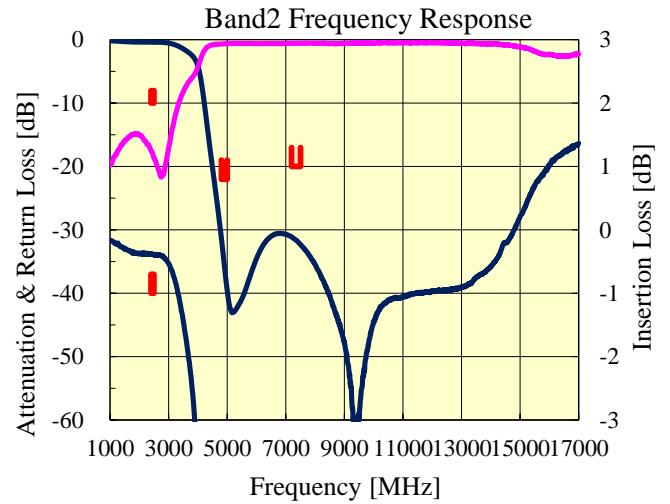
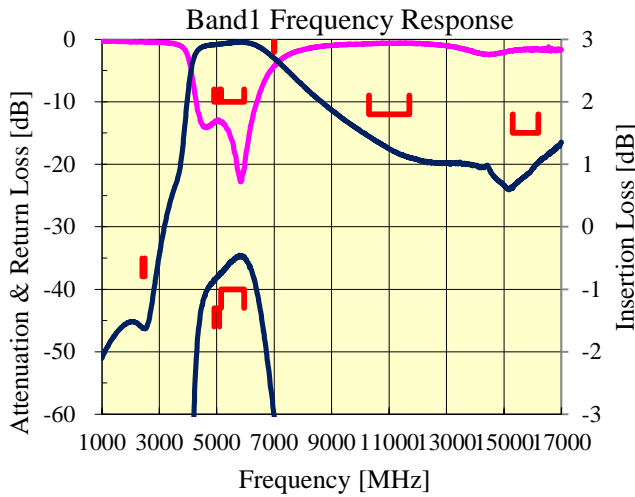
: -20 to +35 deg C.

4.3 Standard Reel Quantity

: 3,000 pcs (per reel, per bag)

5. Representative characteristics

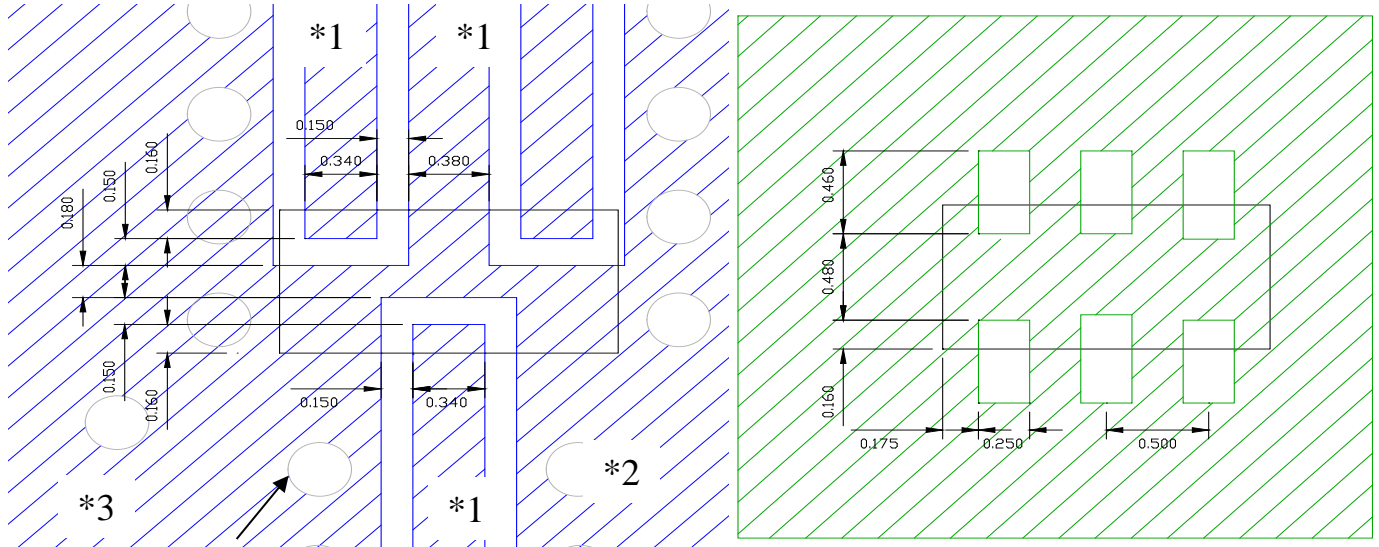
Measured data



6.Recommendation Land Pattern (Unit:mm)

Land Pattern

Resist Pattern



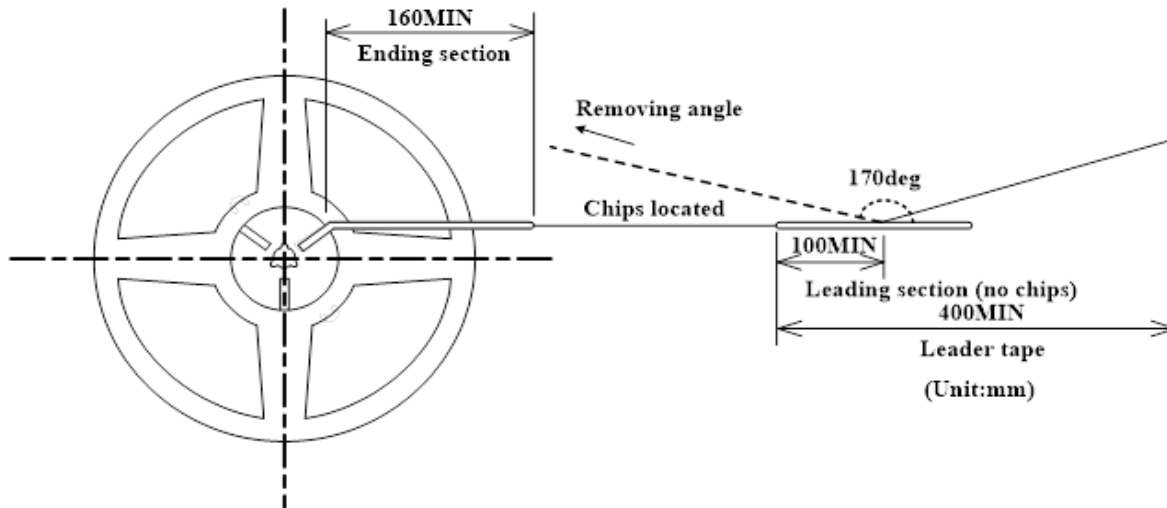
- *1 50 ohm impedance Line**
- *2 Ground Plane**
- *3 Through Hole ($\phi 0.3\text{mm}$)**

7. Packing method

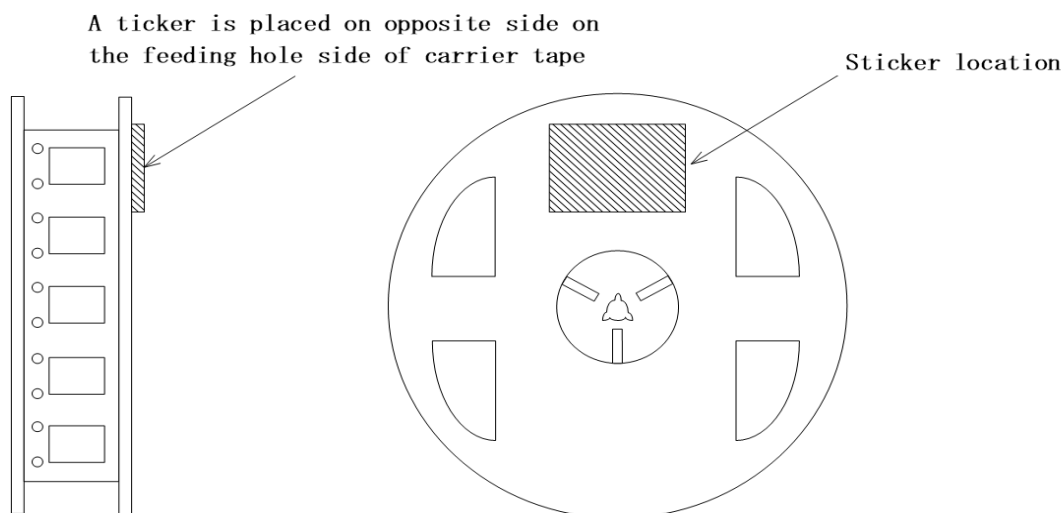
7. 1 Taping conditions

Taping conditions are shown below. Refer to IEC60286-3

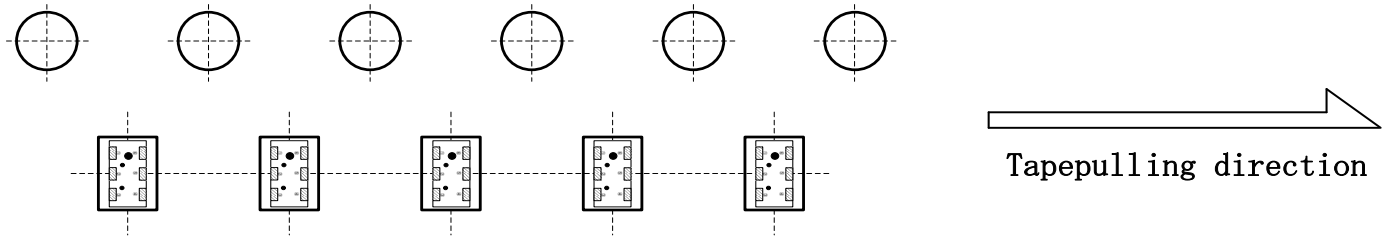
- (1) Tape must be wound clockwise with the feeding hole coming to the right hand side.
- (2) Top cover tape must not cover feeding holes of carrier tape and/or show out of carrier tape.
- (3) A blank section carrying no chips of a length of 160mm min. on ending section and 100mm min. on leading section must be provided.
- (4) A leading section of 400mm min. must be provided on top cover tape.



- (5) To end tape winding, the leading section of top cover tape must be stuck on a side of a reel with adhesive tape.
- (6) Removing force of top cover tape in the unwinding with an angle of 170 degrees between the removed side of a reel and carrier tape must be 0.1 to 1.0N.
- (7) When the embossed tape is turned upside down with the sealing tape peeled off, the filter body inside of the tape must fall off and the mounter must not cause a take-up mistake.
- (8) A sticker carrying Soshin product №, quantity, lot №, inspection date is to be placed on the specified side of reels. And Lot No. means our production control number. The shipment records are available if requested.



(9) Product orientation must be consistent. Products must not be positioned out of the mounting location.

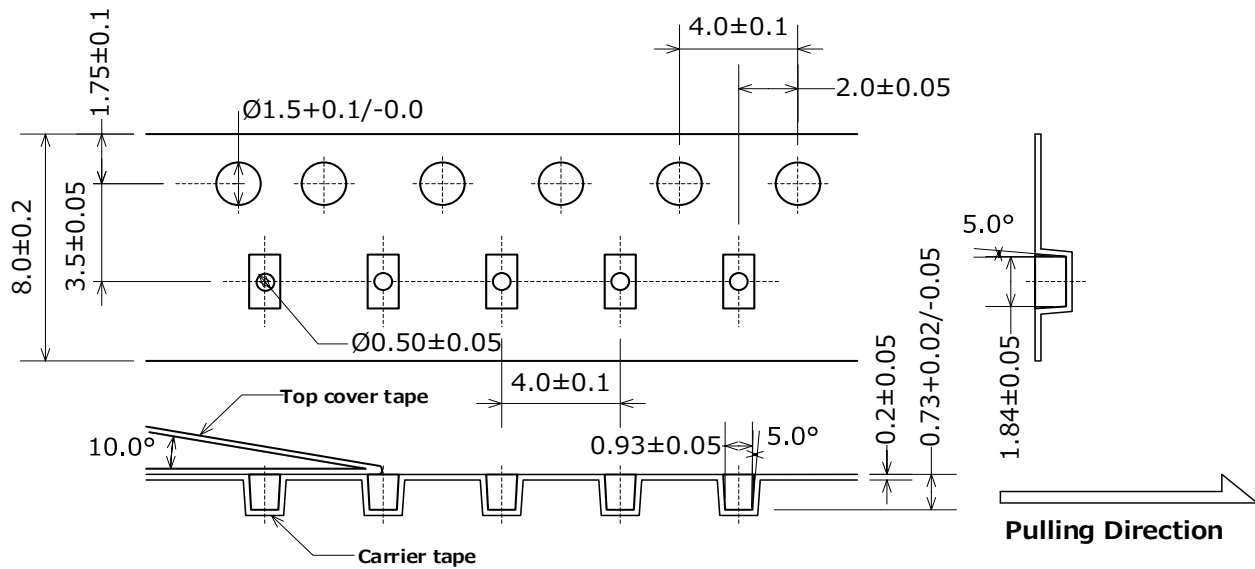


(10) A taping reel must be sealed in a plastic bag, individually.

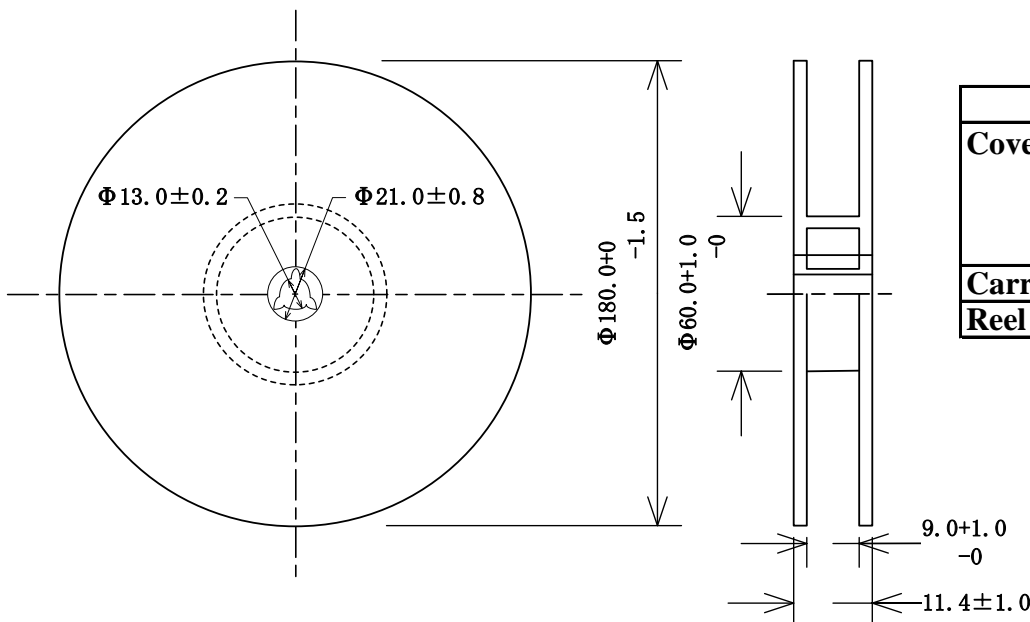
(11) Tape-packaged quantity

The quantity is 3,000 pcs per single tape-package as a rule.

7. 2 Dimensions of the carrier tape (Unit : mm)



7. 3 Carrier tape reel dimensions (Unit : mm)



Material	
Cover tape	Polyester + LDPE + PS resin+ Conductive coat
Carrier tape	PS+Carbon
Reel	PS