Product Description

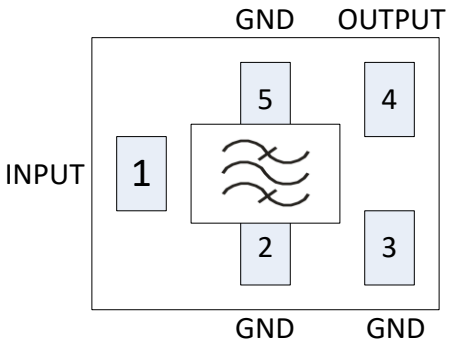
The NS72175A is a high-performance, Surface Acoustic Wave (SAW) technology based band-pass filter with extremely steep skirts, simultaneously exhibiting low loss.

The NS72175A uses Chip Scale Packaging (CSP) techniques to achieve the industry standard 1.1 x 0.9 mm footprint. The filter exhibits excellent insertion loss capabilities.

Applications

- B32_n75_n76 RX Application

Functional Block Diagram



Top Thru View

Product Features

- Low Insertion Loss
- Standard Size: 1.1 x 0.9 mm
- Operating Temperature -30 to +85°C
- Single Ended Operation
- RoHS2.0 Compliant, Halogen Free Pb-free Module Package, MSL3

Ordering Information

Part No.	Description
NS72175A	Packaged Part
NS72175A-EVB	Evaluation Board

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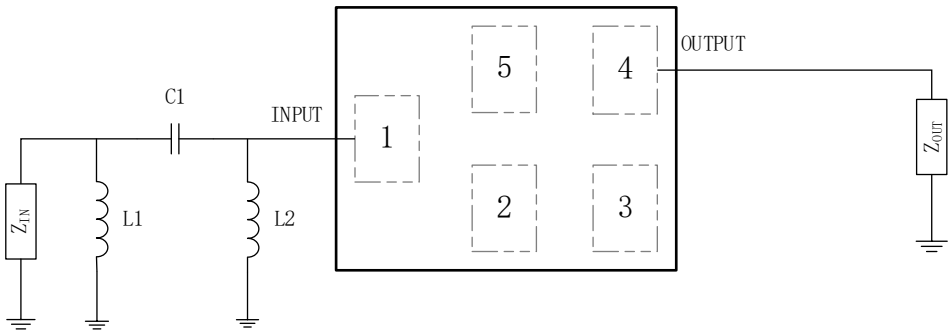
Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40°C ~ +85°C
Operating Temperature	-30°C ~ +85°C
RF Input Power	+15dBm, +50 °C for 5000 hours.
Maximum DC Voltage	3V

Testing Circuit (Top Thru View)



Z_{IN}	50 ohm
Z_{OUT}	50 ohm
L1*	5.0 nH
L2*	4.0 nH
C1*	2.0 pF
Pin 1	Input
Pin 4	Output
Pin 2/3/5	GND

* Ideal Value

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Electrical Specifications

Temperature range for specification: T_C =-30~+85 °C

Input Terminating Condition: Z_{IN} = 50 ohm // 5.0 nH+2pF//4.0nH

Output Terminating Condition: Z_{OUT} = 50 ohm

Parameter	Frequency	Min.	Typ.[a]	Max.	Unit	Note
		-30°C to +85°C				
Insertion Loss	1427 to 1432 MHz		1.5	1.7	dB	N76
	1432 to 1517 MHz		1.4	1.7	dB	N75
	1452 to 1496 MHz		1.4	1.7	dB	B32
Ripple[b]	1427 to 1517 MHz		0.8	1.2	dB	
VSWR_INPUT	1427 to 1517 MHz		1.9	2.2		
VSWR_OUTPUT	1427 to 1517 MHz		1.8	2.0		
Attenuation	703 to 748 MHz	53	56		dB	B28 TX
	800 to 915 MHz	42	45		dB	B8/20/26 TX
	1342 to 1367 MHz	41	44		dB	
	1367 to 1392 MHz	32	38		dB	
	1550 to 1607 MHz	27	36		dB	
	1710 to 1785 MHz	43	46		dB	B3 TX
	1850 to 1910 MHz	37	40		dB	B2 TX
	1920 to 1980 MHz	37	40		dB	B1 TX
	2400 to 2500 MHz	45	49		dB	WIFI 2.4G
	2500 to 2570 MHz	45	48		dB	B7 TX
	2854 to 3034 MHz	41	44		dB	
	4281 to 4551 MHz	33	36		dB	
	4900 to 5950 MHz	31	34		dB	WIFI 5G
	5708 to 6068 MHz	30	33		dB	
	5950 to 8000 MHz	23	25		dB	

[a]. Typical data is the worst value of the parameter over the indicated band at +25°C.

[b]. Ripple is the difference between the max and min value in passband.

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Typical Transmission Coefficient (+25°C)

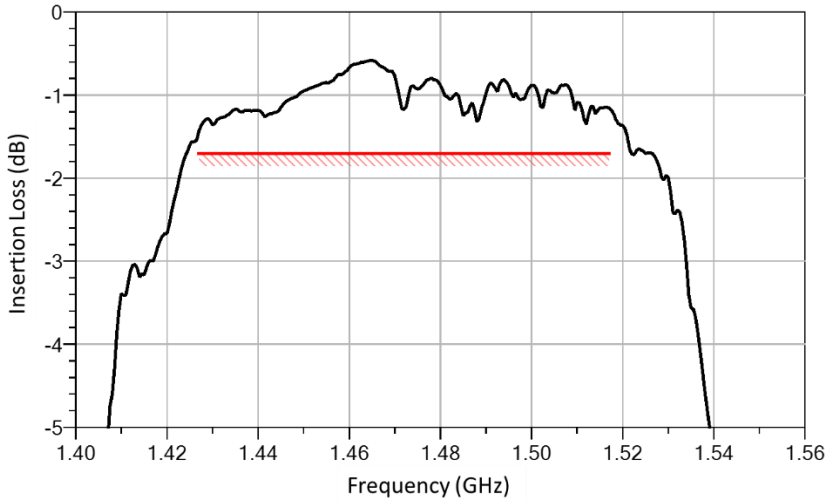

Figure 1. Passband Insertion Loss, 1427 – 1517 MHz

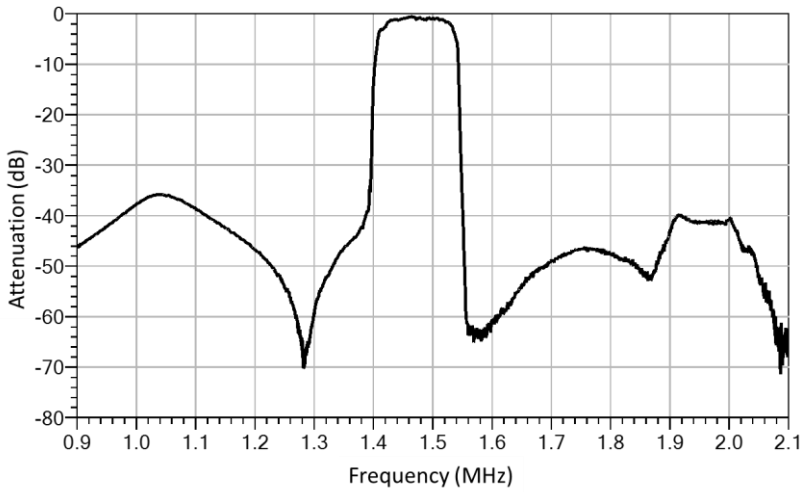

Figure 2. Narrow Band Attenuation, 900 – 2100 MHz

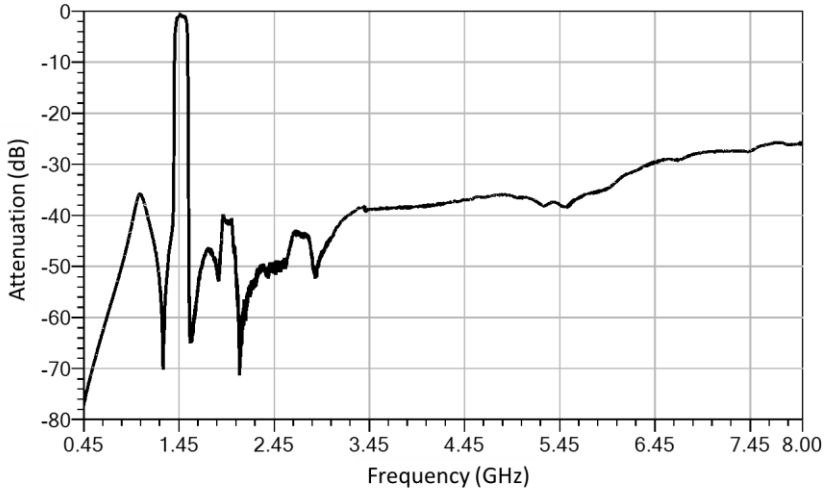

Figure 3. Wide Band Attenuation, 450 – 8000 MHz

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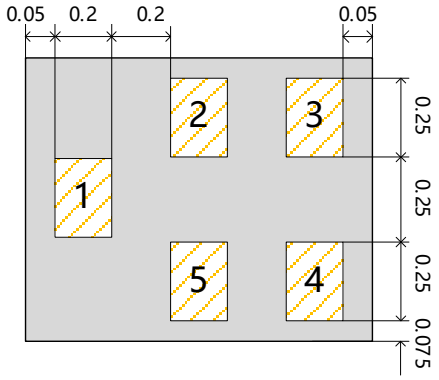
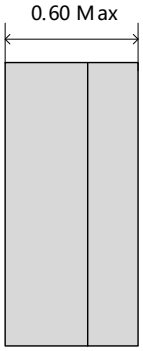
Package & Dimensions (Unit: mm)

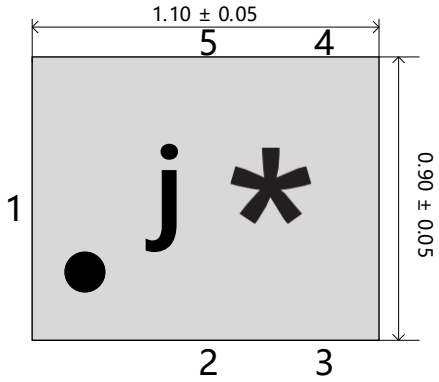
Bottom View





Side View

Top View

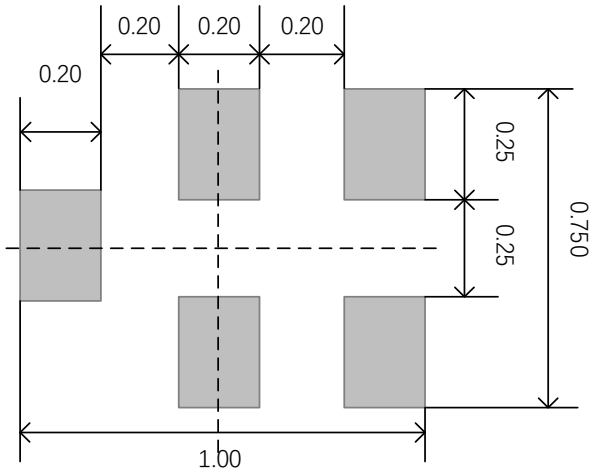


Note:

The character 'j' indicates NS72175A.

The character '*' indicates date code.

PCB Mounting Pattern (Unit: mm)



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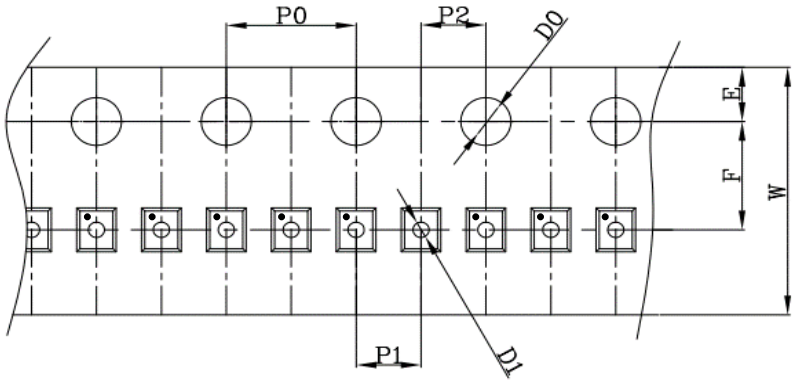
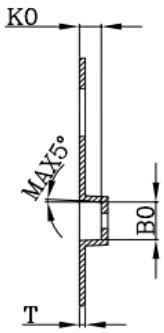
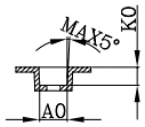
Tape and Reel Information (Unit: mm)







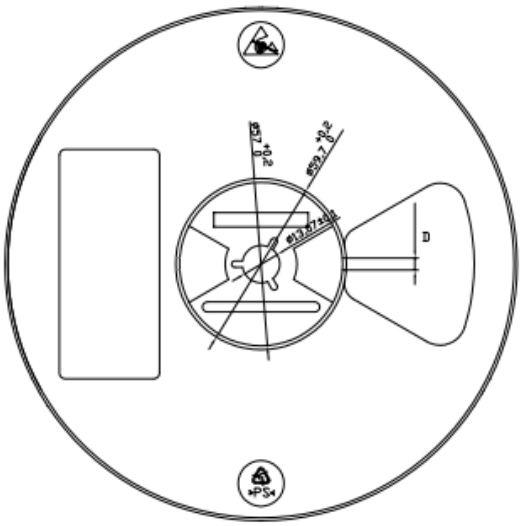
A0	1.02+/-0.05	T	0.20+/-0.03
B0	1.22+/-0.05	E	1.75+/-0.10
K0	0.67+/-0.05	F	3.50+/-0.05
P0	4.00+/-0.10	D0	1.55+/-0.05
P1	2.00+/-0.05	D1	0.50+/-0.10
P2	2.00+/-0.05	W	8.00+0.30/-0.10

(1) Black antistatic composite PC.

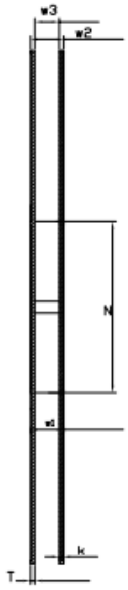
(2) Cumulative tolerance of 10 sprocket holes is ± 0.20.

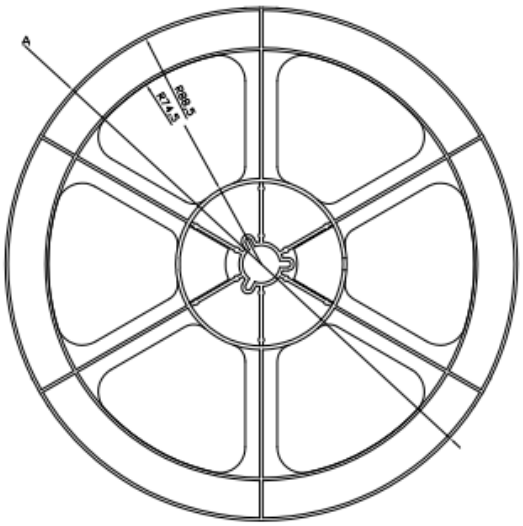
(3) All dimensions meet EIA-481-E requirements.

(4) The sector of 250mm straps shall not exceed 2mm.

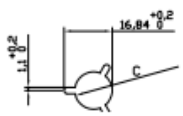


产品正面





产品反面



Reeling Quantity: 10000 pcs / Reel

Type	A	N	C	D	w1	w2	w3	T	k
8mm	$\Phi 180^{+2}_{-2}$	$\Phi 60^{+1}_{-1}$	$\Phi 13.1^{+0.2}_{-0.2}$	$\Phi 4.2^{+0.5}_{-0.5}$	8.4^{+1}_{-0}	11.6^{+1}_{-1}	8.75^{+1}_{-1}	$1.5^{+0.15}_{-0.15}$	$1.25^{+0.1}_{-0.05}$

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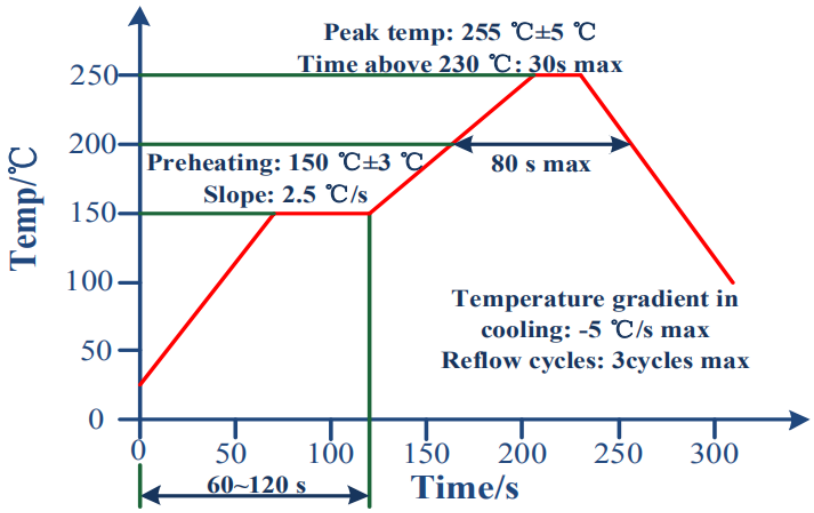
Recommended IR Reflow Profile



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