

Product Description

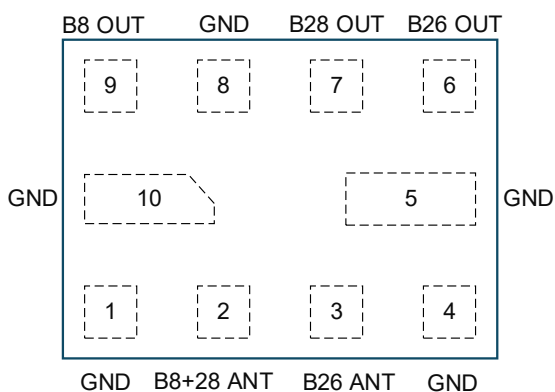
The NS848628FA is a high performance Surface Acoustic Wave Bank(SAW Bank) technology based Triple RX filter with extremely low loss, and roll-off features. The 2 in 3 out design makes the board design easy and simple.

The NS848628FA uses Chip Scale Packaging (CSP) techniques to achieve the industry standard 1.4 x 1.1 mm footprint.

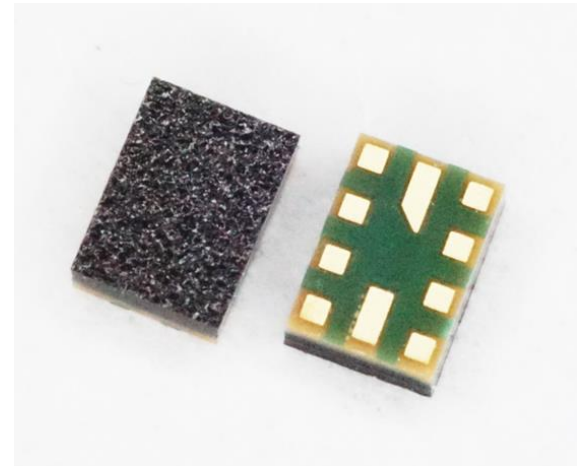
Applications

- Cellular Phone
- IOT Relevant Market

Functional Block Diagram



Top Thru View



Product Features

- Low Insertion Loss
- Standard Size: 1.4 x 1.1 mm
- Operating Temperature -30 to +85°C
- Single Ended Operation
- RoHS2.0 Compliant, Halogen Free
Pb-free Module Package, MSL3

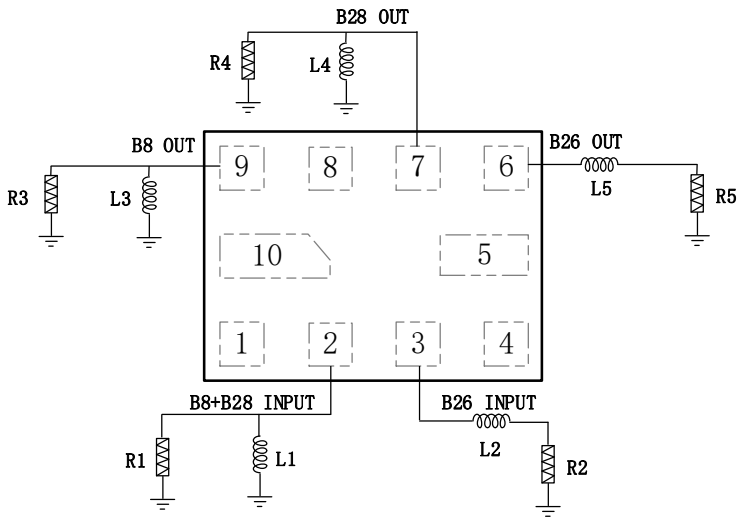
Ordering Information

Part No.	Description
NS848628FA	Packaged Part
NS848628FA_EVB	Evaluation Board

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40°C ~ +85°C
Operating Temperature	-30°C ~ +85°C
RF Input Power	+15dBm, +55°C for 5000 hours
Maximum DC Voltage	3 V

Testing Circuit (Top Thru View)



Top Thru View

R1/R2/R3/R4/R5	50 ohm
L1*	7.8nH
L2*	5nH
L3*	25nH
L4*	14nH
L5*	5nH
Pin2	B8+B28 INPUT
Pin3	B26 INPUT
Pin6	B26 OUT
Pin7	B28 OUT
Pin9	B8 OUT
Pin 1/4/5/8/10	GND

*Ideal Value

Electrical Specifications (B8)

Parameter	Frequency	Min.	Typ. ^[a]	Max.	Unit	Note
		-30°C to +85°C				
Insertion Loss	925 to 960 MHz		1.8	2.3	dB	
Ripple ^[b]	925 to 960 MHz		0.7	1.3	dB	
VSWR_INPUT	925 to 960 MHz		1.5	1.8		
VSWR_OUT	925 to 960 MHz		1.5	1.8		
Attenuation	663 to 698 MHz	31	35		dB	B71
	699 to 716 MHz	31	35		dB	B12
	703 to 748 MHz	31	35		dB	B28
	814 to 849 MHz	30	33		dB	B26
	880 to 915 MHz	30	33		dB	B8
	1710 to 1785 MHz	37	41		dB	B3
	1880 to 1920 MHz	38	42		dB	B39
	1920 to 1980 MHz	39	44		dB	B1
	2010 to 2025MHz	37	43		dB	B34
	2300 to 2400 MHz	35	43		dB	B40
	2400 to 2483 MHz	36	43		dB	WiFi 2.4G
	2496 to 2690 MHz	40	45		dB	B41
	2500 to 2570 MHz	40	45		dB	B7
	3400 to 3600 MHz	35	41		dB	B42
	3600 to 3800 MHz	34	39		dB	B43
	5150 to 5950 MHz	30	33		dB	WiFi 5G

[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.

Electrical Specifications (B26)

Parameter	Frequency	Min.	Typ. ^[a]	Max.	Unit	Note
		-30°C to +85°C				
Insertion Loss	859 to 894 MHz		1.5	2.0	dB	
Ripple ^[b]	859 to 894 MHz		0.7	1.2	dB	
VSWR_INPUT	859 to 894 MHz		1.6	1.9		
VSWR_OUT	859 to 894 MHz		1.6	1.9		
Attenuation	663 to 698 MHz	29	34		dB	B71
	699 to 716 MHz	30	33		dB	B12
	703 to 748 MHz	30	35		dB	B28
	814 to 849 MHz	32	36		dB	B26
	1710 to 1785 MHz	38	43		dB	B3
	1880 to 1920 MHz	38	43		dB	B39
	1920 to 1980 MHz	38	43		dB	B1
	2010 to 2025 MHz	38	43		dB	B34
	2300 to 2400 MHz	39	44		dB	B40
	2400 to 2483 MHz	40	45		dB	WiFi 2.4G
	2496 to 2690 MHz	40	45		dB	B41
	2500 to 2570 MHz	39	45		dB	B7
	3400 to 3600 MHz	43	50		dB	B42
	3600 to 3800 MHz	40	46		dB	B43
	4800 to 5000 MHz	40	48		dB	N79
	5150 to 5950 MHz	35	42		dB	WiFi 5G

[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.

Electrical Specifications (B28)

Temperature range for specification: $T_c = -30 \sim +85\text{ }^{\circ}\text{C}$

Parameter	Frequency	Min.	Typ. ^[a]	Max.	Unit	Note
		-30°C to +85°C				
Insertion Loss	758 to 803 MHz		1.5	2.9	dB	
Ripple ^[b]	758 to 803 MHz		0.7	1.6	dB	
VSWR_INPUT	758 to 803 MHz		1.7	2.0		
VSWR_OUT	758 to 803 MHz		1.8	2.0		
Attenuation	663 to 698 MHz	30	33		dB	B71
	699 to 716 MHz	30	33		dB	B12
	703 to 748 MHz	28	31		dB	B28
	824 to 849 MHz	16	30		dB	B5
	880 to 915 MHz	30	33		dB	B8
	1710 to 1785 MHz	35	38		dB	B3
	1880 to 1920 MHz	32	36		dB	B39
	1920 to 1980 MHz	32	35		dB	B1
	2010 to 2025 MHz	33	37		dB	B34
	2300 to 2400 MHz	33	36		dB	B40
	2400 to 2483 MHz	33	38		dB	WiFi 2.4G
	2496 to 2690 MHz	33	37		dB	B41
	2500 to 2570 MHz	33	37		dB	B7
	3400 to 3600 MHz	30	33		dB	B42
	3600 to 3800 MHz	30	33		dB	B43
	5150 to 5950 MHz	18	20		dB	WiFi 5G

[a]. Typical data is the worst value of the parameter over the indicated band at $+25^{\circ}\text{C}$.

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

Typical Transmission Coefficient (Band8, +25°C)

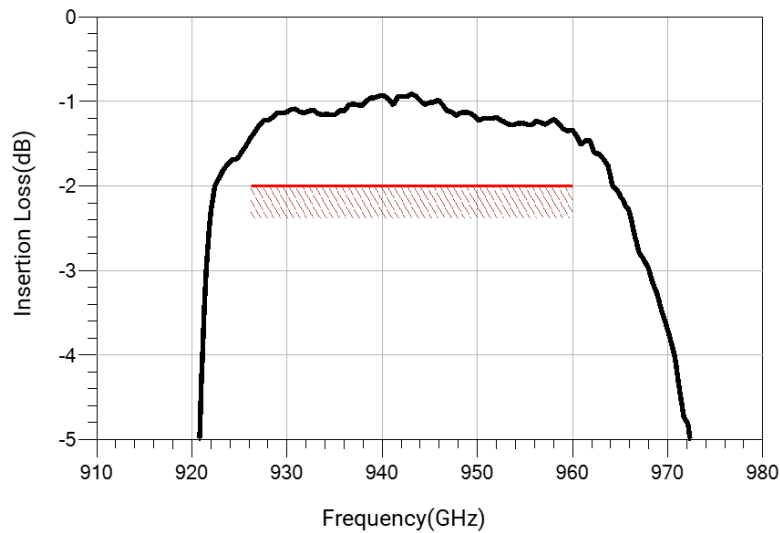


Figure 1. Passband Insertion Loss, 925 – 960 MHz

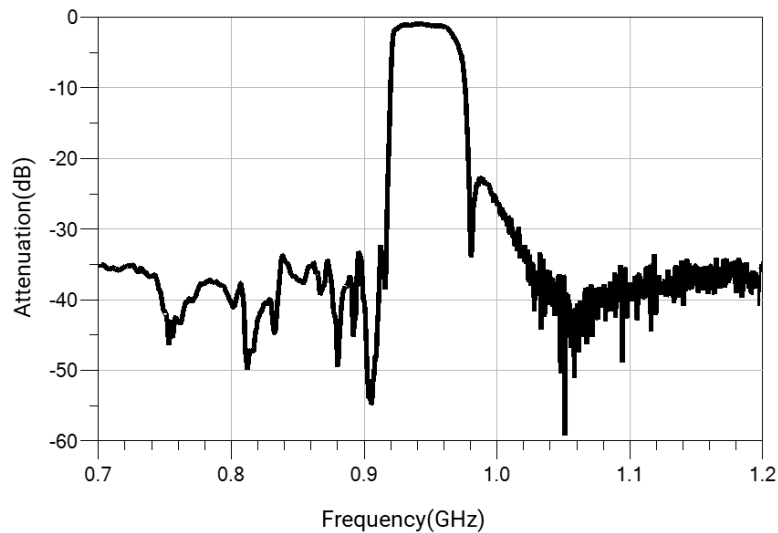


Figure 2. Narrow Band Attenuation, 700 – 1200MHz

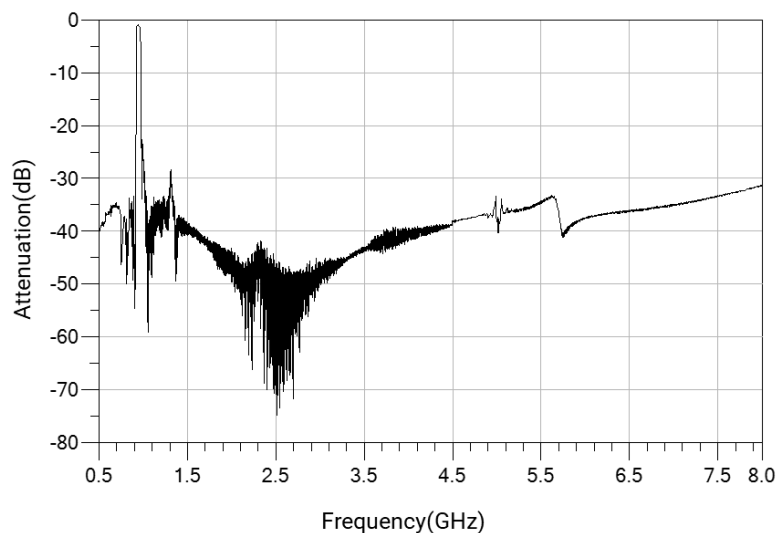


Figure 3. Wide Band Attenuation, 400 – 6000 MHz

Typical Transmission Coefficient (Band26, +25°C)

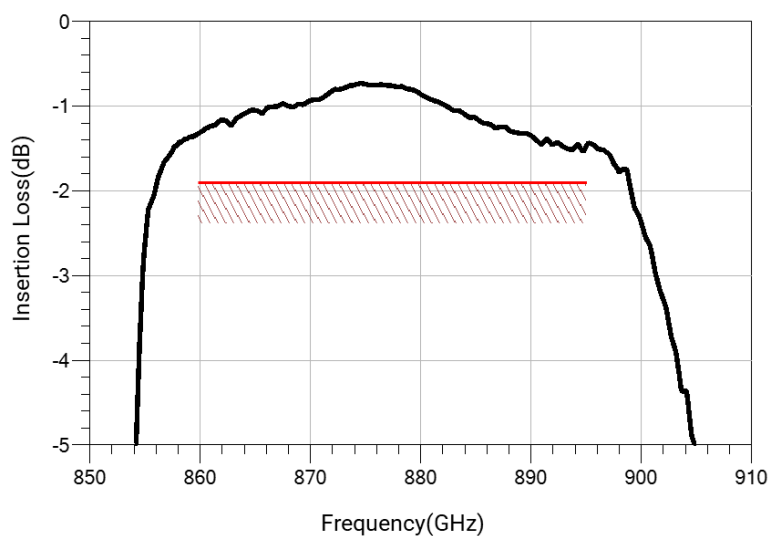


Figure 4. Passband Insertion Loss, 859 – 894 MHz

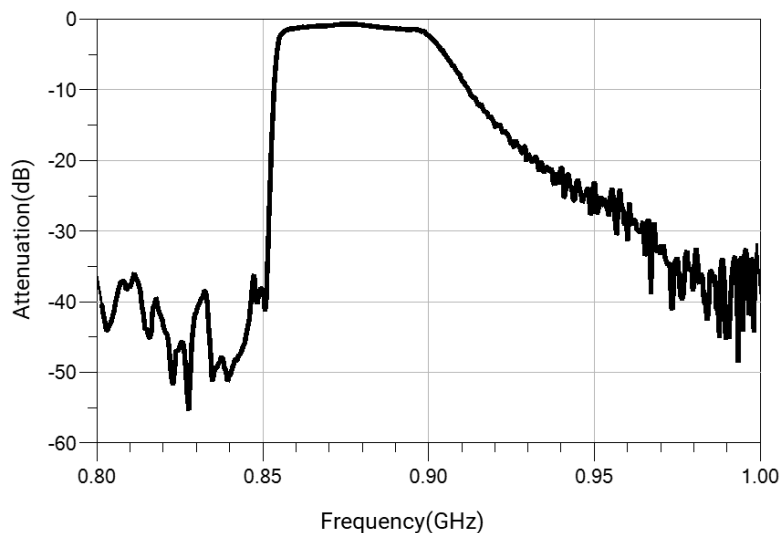


Figure 5. Narrow Band Attenuation, 800 – 1000MHz

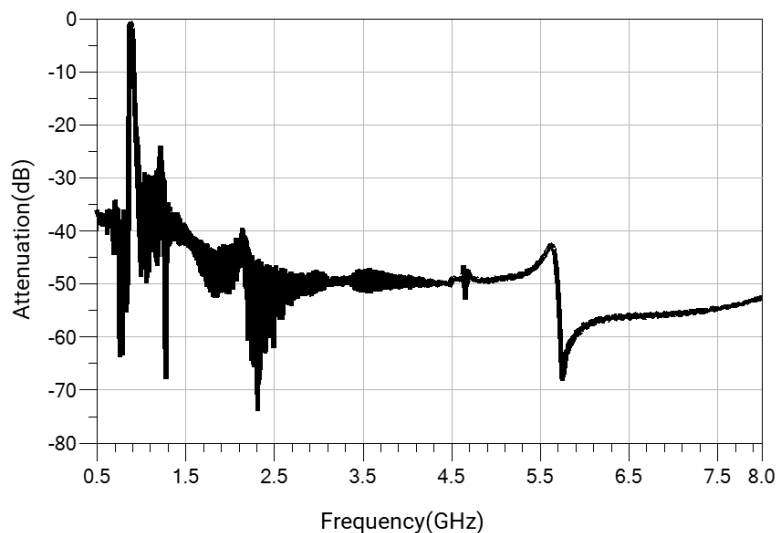


Figure 6. Wide Band Attenuation, 500 – 8000 MHz

Typical Transmission Coefficient (Band28, +25°C)

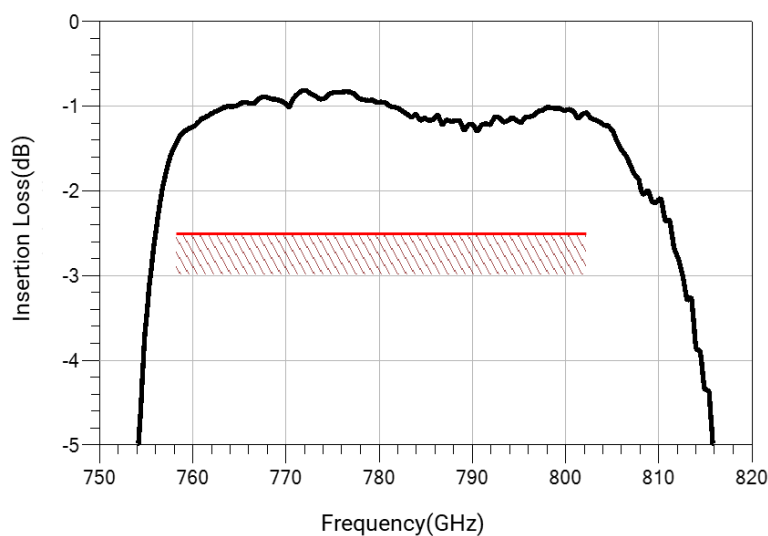


Figure 7. Passband Insertion Loss, 758 – 803 MHz

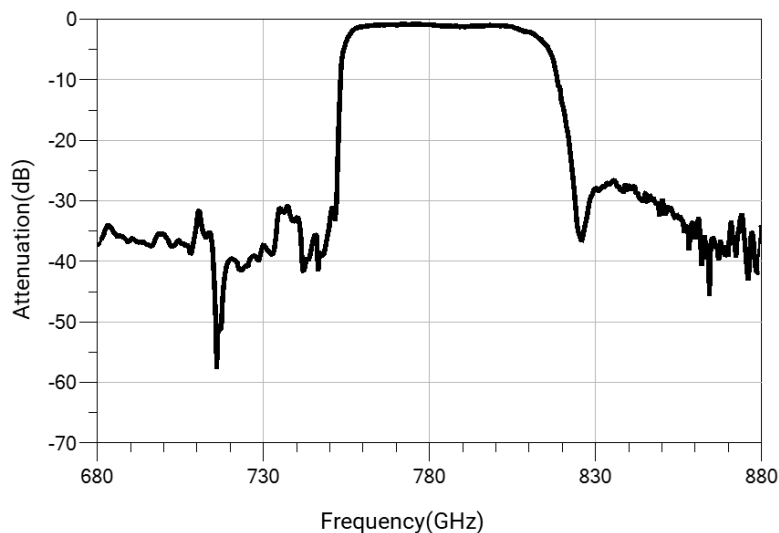


Figure 8. Narrow Band Attenuation, 680 – 880MHz

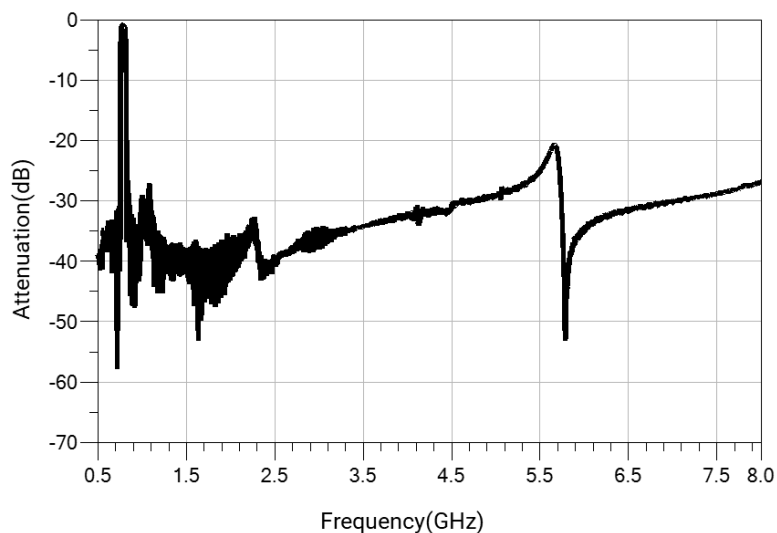
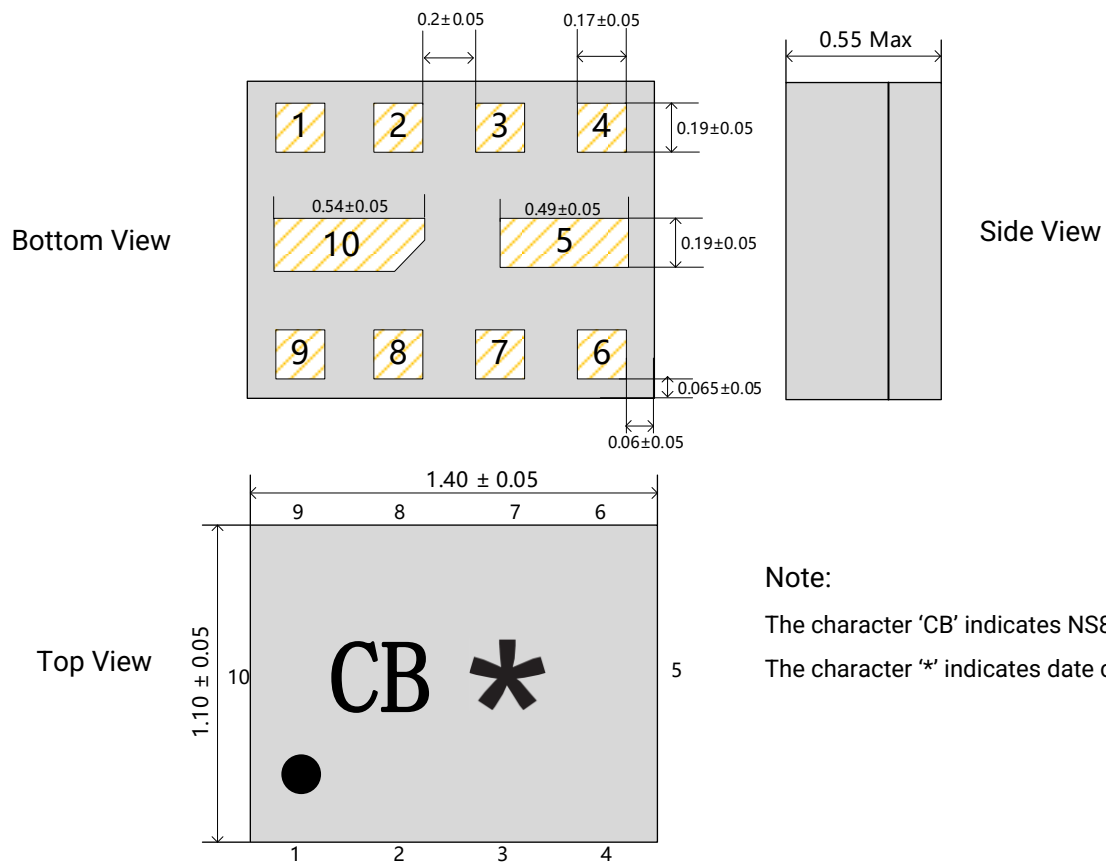
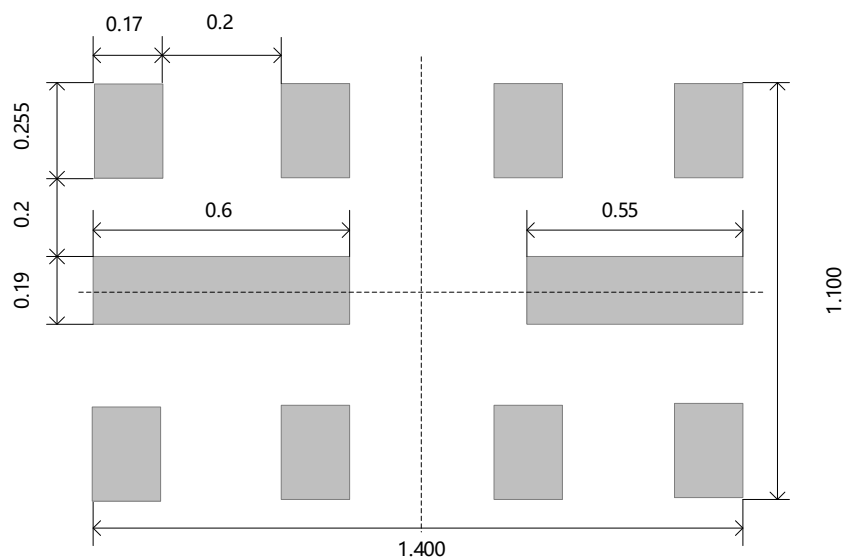


Figure 9. Wide Band Attenuation, 500 – 8000 MHz

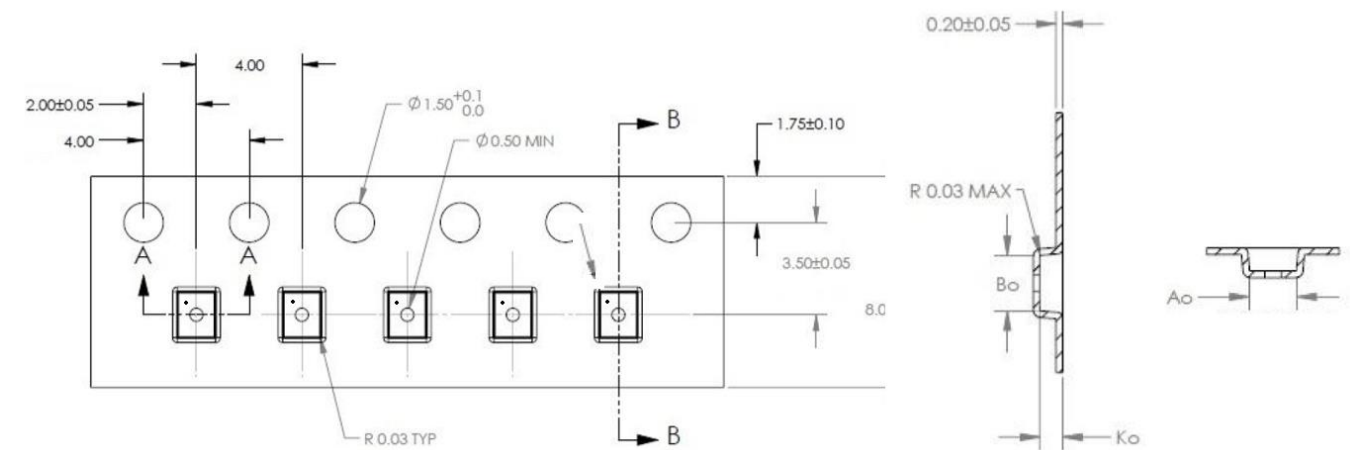
Package & Dimensions (Unit: mm)



PCB Mounting Pattern (Unit: mm)



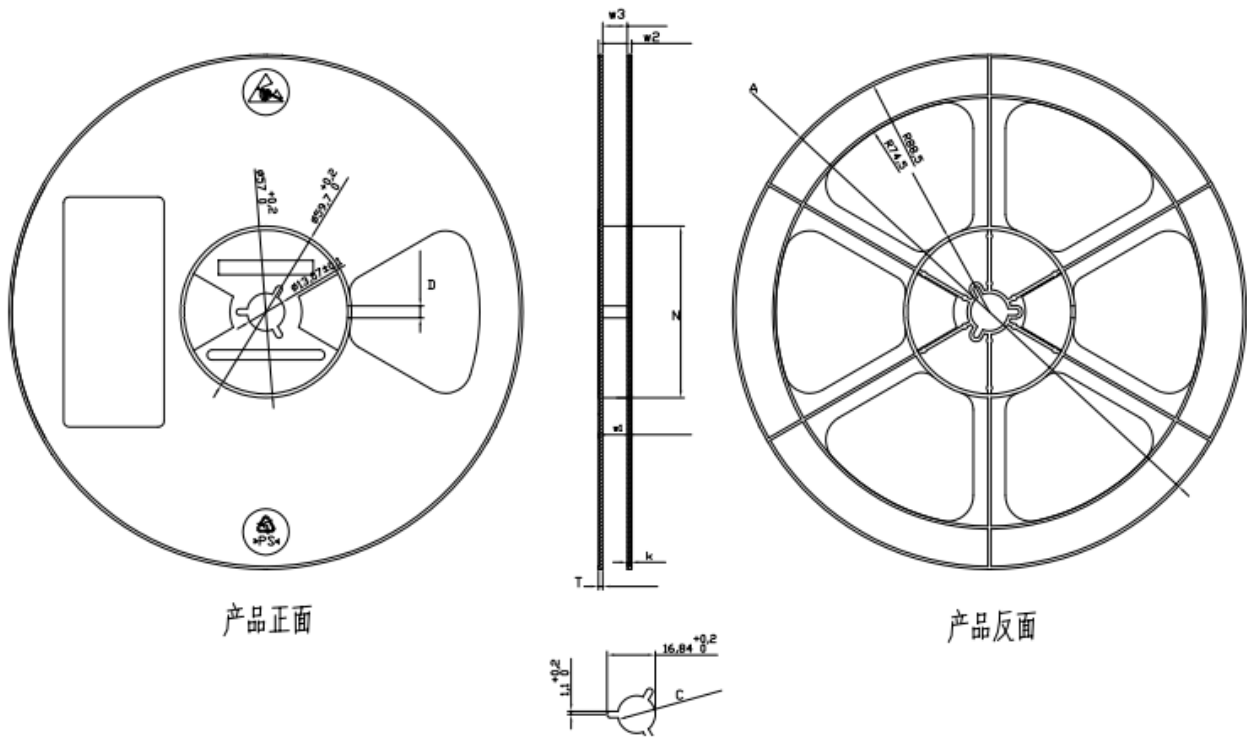
Tape and Reel Information (Unit: mm)



Ao	1.41+/-0.03
Bo	1.71+/-0.03
Ko	0.7+/-0.03

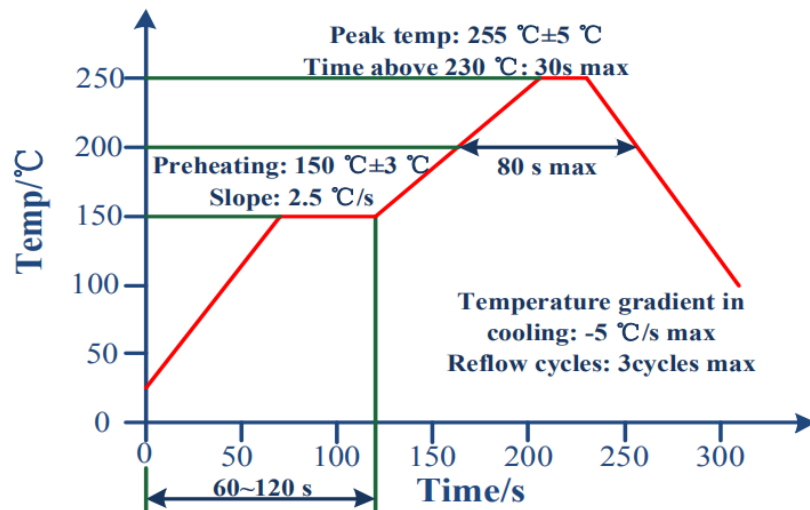
- (1) Black antistatic composite PC.
- (2) Cumulative tolerance of 10 sprocket holes is ± 0.20 .
- (3) All dimensions meet EIA-481-E requirements.
- (4) The sector of 250mm straps shall not exceed 2mm.

Reeling Quantity: 5000 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}	$1.5^{+0.15}_{-0.15}$	$1.25^{+0.1}_{-0.05}$

Recommended IR Reflow Profile



Important Notes

1. All data or information contained herein are subject to change without prior notice. Please contact NEWSONIC for verifying details of product specification before ordering NEWSONIC product.
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