



NSNJ2023

769.5 MHz / 860.5 MHz SAW Filter

■ APPLICATION

For 769.5 MHz / 860.5 MHz nominal center frequency
Usable pass band 13 MHz / 19 MHz

■ ELECTRICAL SPECIFICATIONS

Generation condition : T_a = -30 to +85°C, the device characteristics are measured with application circuit.

Parameters		Target specification			Unit	
		MIN	TYP (@25°C)	MAX		
Filter 1	Nominal center frequency (f ₀)	-	769.5	-	MHz	
	Insertion loss	763 to 776 MHz	2.0	3.5	dB	
	Response variation			2.8 *1		
	Input and Output VSWR			2.0		
				1.5 *1		
	Out of band rejection (Relative to through level)	0.3 MHz to 750 MHz	27	30	-	dB
		750 MHz to 756 MHz	-	6	-	
			4 *1			
788 MHz to 890 MHz		7	28	-		
890 MHz to 1500 MHz	25 *1	36	-	-		
Filter 2	Nominal center frequency (f ₀)	-	860.5	-	MHz	
	Insertion loss	851 to 870 MHz	2.5	3.5	dB	
	Response variation			3.0 *1		
	Input and Output VSWR			2.0		
				1.5 *1		
	Out of band rejection (Relative to through level)	0.3 MHz to 830 MHz	35	38	-	dB
		830 MHz to 837 MHz	15	30	-	
		885 MHz to 1500 MHz	27	29	-	

*1 : T_a = +20 to +30°C

■ ABSOLUTE MAXIMUM RATINGS

Parameters	Ratings
Maximum input power	+15 dBm
Maximum DC voltage	7.5 V
Operating temperature range	-30 to +85°C
Storage temperature	-40 to +90°C

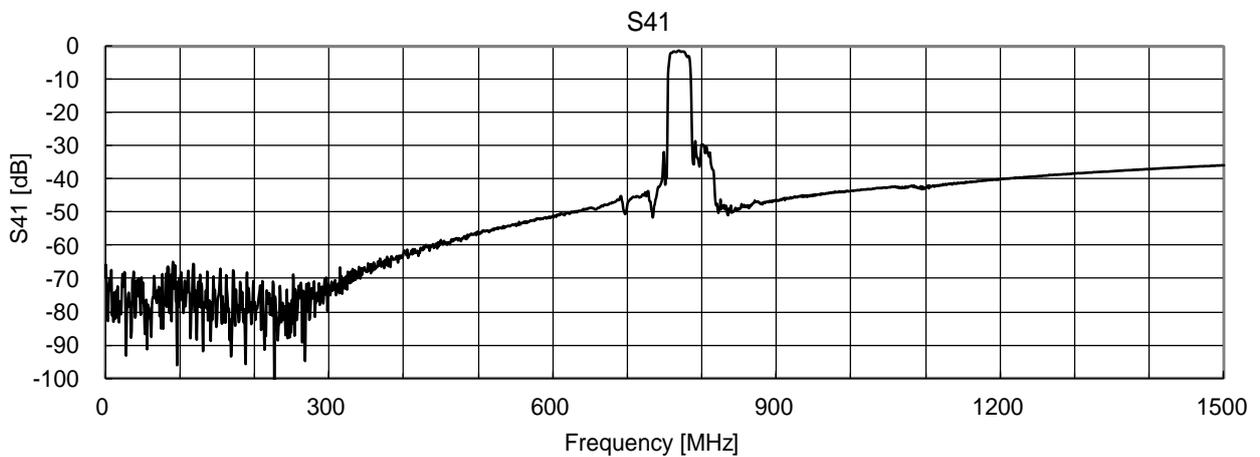
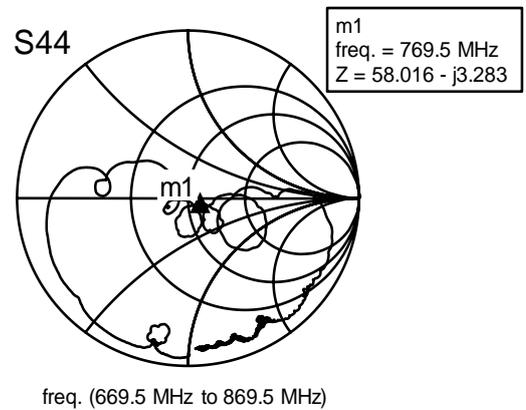
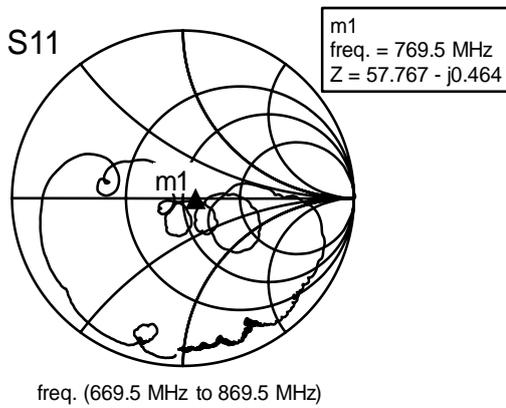
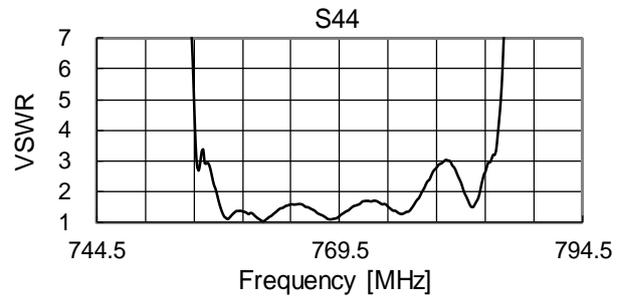
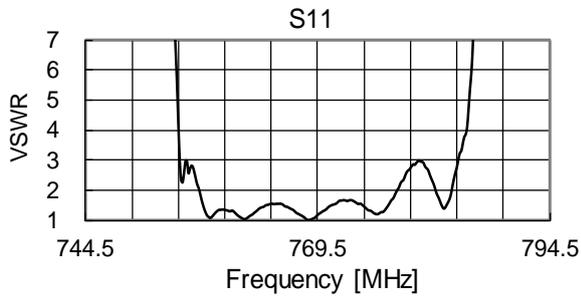
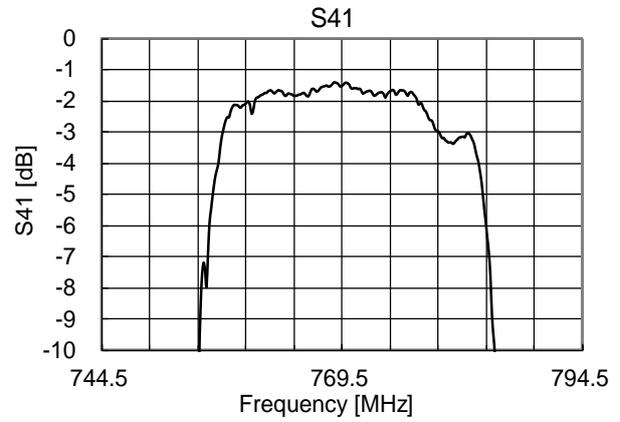
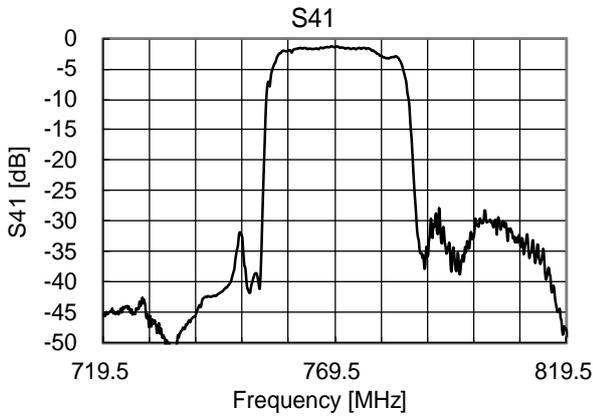
ABSOLUTE MAXIMUM RATINGS

Electronic and mechanical stress momentarily exceeded absolute maximum ratings may cause permanent damage and may degrade the lifetime and safety for both device and system using the device in the field. The functional operation at or over these absolute maximum ratings is not assured.

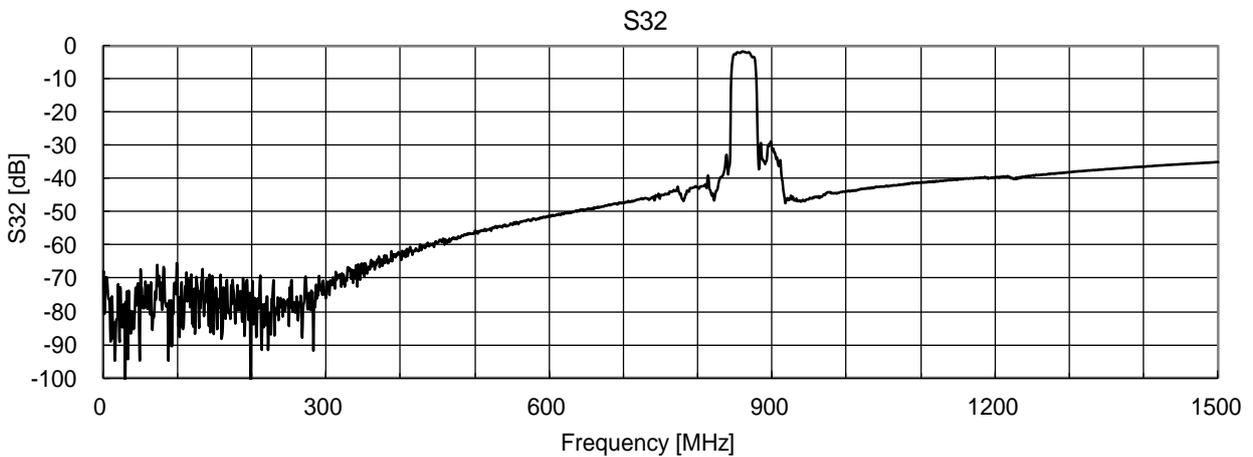
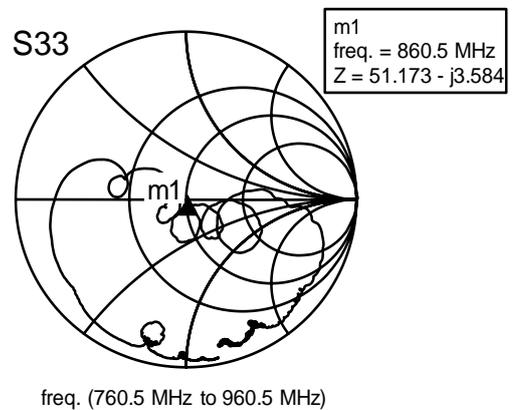
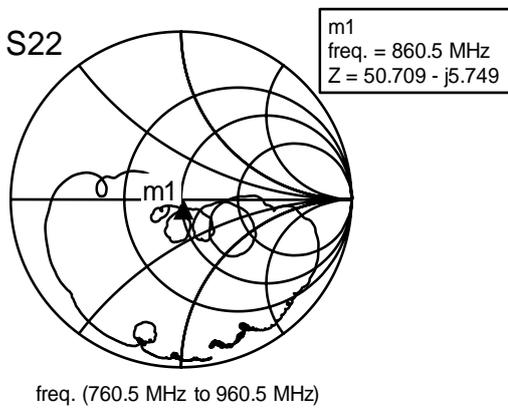
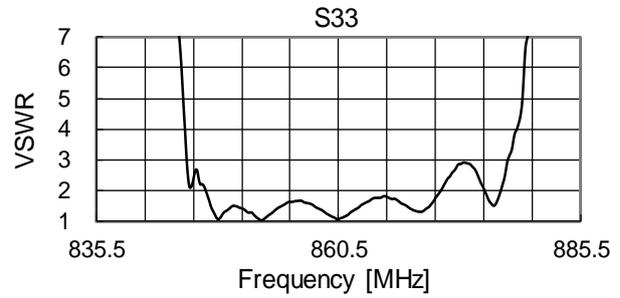
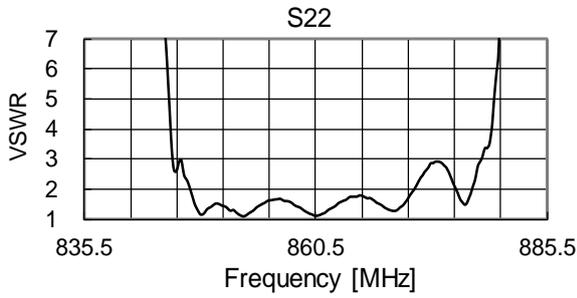
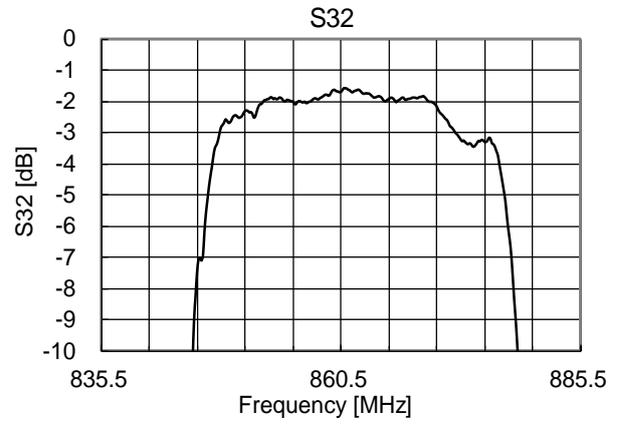
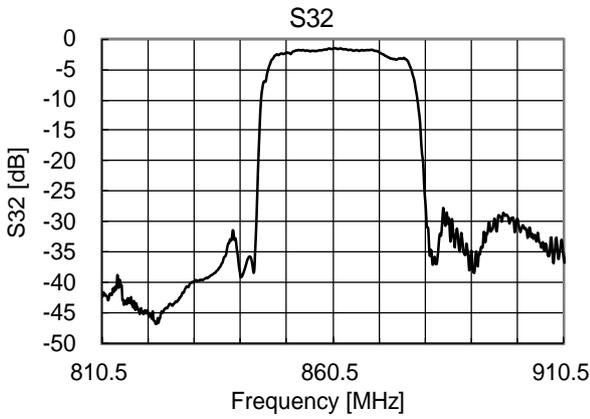
■ MECHANICAL SPECIFICATIONS

Package size is designed 3.0 x 3.0 x 1.08 (mm³) for SMD (Surface Mount Device) type.

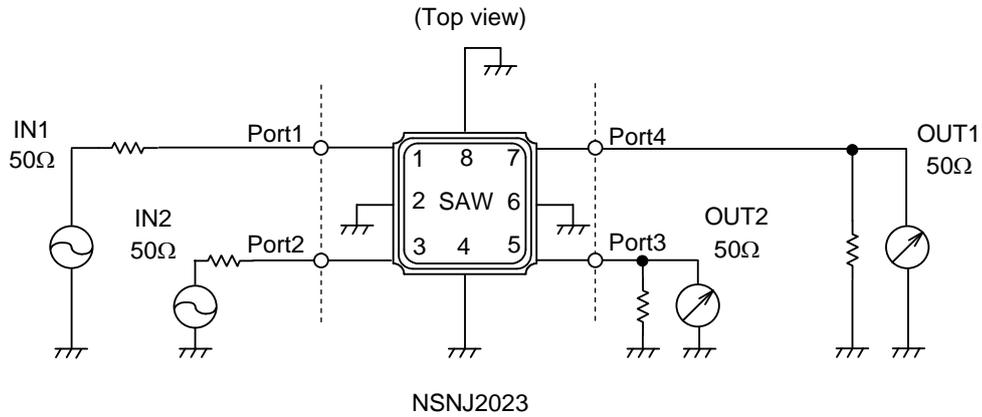
■ TYPICAL CHARACTERISTICS (Filter1 769.5 MHz)



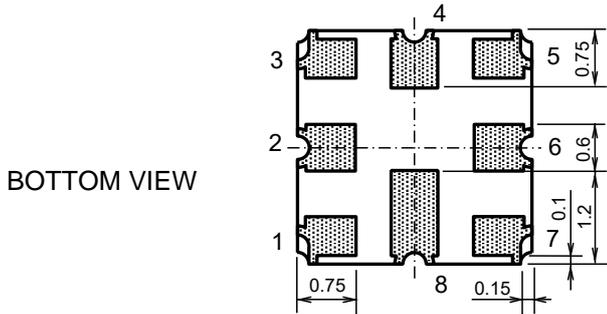
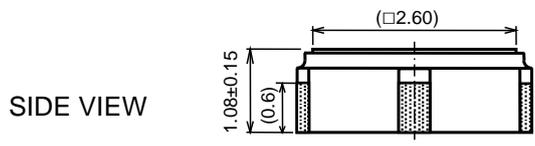
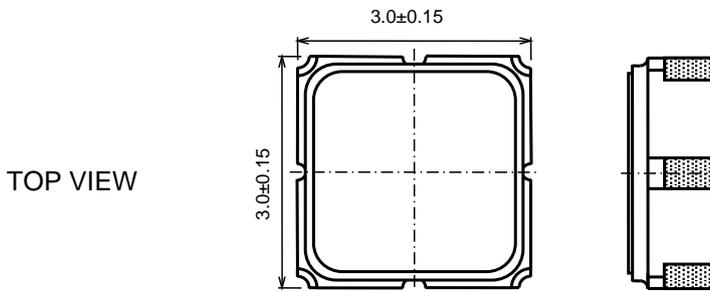
■ TYPICAL CHARACTERISTICS (Filter2 860.5 MHz)



■ APPLICATION CIRCUIT



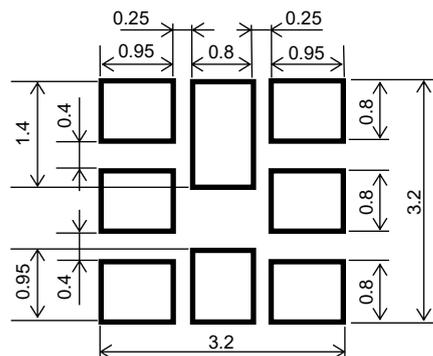
■ PACKAGE INFORMATION



PIN CONFIGURATION

PIN NO.	CONNECTION
1	IN1(769.5 MHz)
2	GND
3	IN2(860.5 MHz)
4	GND
5	OUT2(860.5 MHz)
6	GND
7	OUT1(769.5 MHz)
8	GND

LAND PATTERN



Units: mm

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8. **Quality Warranty**
 - 8-1. **Quality Warranty Period**

In the case of a product purchased through an authorized distributor or directly from us, the warranty period for this product shall be one (1) year after delivery to your company. For defective products that occurred during this period, we will take the quality warranty measures described in section 8-2. However, if there is an agreement on the warranty period in the basic transaction agreement, quality assurance agreement, delivery specifications, etc., it shall be followed.
 - 8-2. **Quality Warranty Remedies**

When it has been proved defective due to manufacturing factors as a result of defect analysis by us, we will either deliver a substitute for the defective product or refund the purchase price of the defective product.

Note that such delivery or refund is sole and exclusive remedies to your company for the defective product.
 - 8-3. **Remedies after Quality Warranty Period**

With respect to any defect of this product found after the quality warranty period, the defect will be analyzed by us. On the basis of the defect analysis results, the scope and amounts of damage shall be determined by mutual agreement of both parties. Then we will deal with upper limit in Section 8-2. This provision is not intended to limit any legal rights of your company.
9. Anti-radiation design is not implemented in the products described in this document.
10. The X-ray exposure can influence functions and characteristics of the products. Confirm the product functions and characteristics in the evaluation stage.
11. WLCSP products should be used in light shielded environments. The light exposure can influence functions and characteristics of the products under operation or storage.
12. Warning for handling Gallium and Arsenic (GaAs) products (Applying to GaAs MMIC, Photo Reflector). These products use Gallium (Ga) and Arsenic (As) which are specified as poisonous chemicals by law. For the prevention of a hazard, do not burn, destroy, or process chemically to make them as gas or power. When the product is disposed of, please follow the related regulation and do not mix this with general industrial waste or household waste.
13. Please contact our sales representatives should you have any questions or comments concerning the products or the technical information.



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