SK3010NE

MSL 3 Device

RoHS compliance

Pb free

Band 1, SAW Duplexer Filter
Unbalanced / 8pin / 1814
Rev 1.01

- ❒Electrical Characteristics
- ❒Package Dimensions
- ❒Testing Environment
- ❒Frequency Characteristics
- ❒Reflow Condition

❒ Electrical Characteristics

Maximum Ratings

Parameters Description		Unit	Minimum	Typical	Maximum
Operating Temperature Range		°C	-30	-	+85
Storage Temperature Range		°C	-40	-	+85
Maximum DC Voltage		V	-	-	5
Maximum Input Power *(LTE Signal for 3000h, @50°C)*		dBm	-	-	30
Source Impedance (unbalanced)		Ω	-	50	-
Load Impedance (unbalanced)		Ω	-	50	-
Length x Width		mm^2	-	1.8 x 1.4	-
Height		mm	-	-	0.6
ESD voltage	**CDM**	V	-	-	500
	HBM	V	-	-	250

Electrical Specification

TX to ANT Parameters Description			Characteristics			Unit	Notes
			Min	Typ.	Max		
Insertion Loss		1920 to 1980 MHz		2.0	2.5	dB	
Passband Ripple		1920 to 1980 MHz		0.5	0.9	dB	
VSWR	ANT	1920 to 1980 MHz		1.3	2.1	-	
	TX	1920 to 1980 MHz		1.4	2.1	-	
Attenuation		450 to 800 MHz	45	49		dB	
		814 to 849 MHz	43	48		dB	
		859 to 894 MHz	41	46		dB	
		880 to 915 MHz	40	45		dB	
		925 to 960 MHz	39	44		dB	
		1226 to 1250 MHz	32	37		dB	
		1559 to 1606 MHz	35	40		dB	
		1805 to 1880 MHz	24	30		dB	
		2110 to 2170 MHz	44	49		dB	
		2401 to 2483 MHz	34	39		dB	
		2500 to 2570 MHz	33	38		dB	
		2496 to 2690 MHz	32	37		dB	
		3840 to 3960 MHz	29	35		dB	
		5760 to 5940 MHz	10	16		dB	
		4900 to 5950 MHz	10	16		dB	

Typical value at 25±2°C

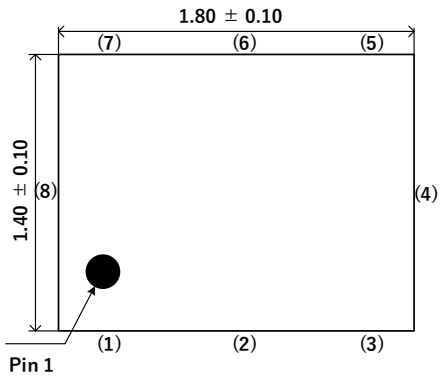
ANT to Rx Parameters Description			Characteristics			Unit	Notes
			Min	Typ	Max		
Insertion Loss		2110 to 2170 MHz		2.2	3.2	dB	
Passband Ripple		2110 to 2170 MHz		1.0	1.8	dB	Any 5MHz
VSWR	ANT	2110 to 2170 MHz		1.6	2.2	-	
	RX	2110 to 2170 MHz		1.3	2.2	-	
Attenuation		450 to 699 MHz	40	45		dB	
		703 to 733 MHz	39	45		dB	
		718 to 748 MHz	38	43		dB	
		814 to 849 MHz	36	42		dB	
		880 to 915 MHz	35	41		dB	
		1710 to 1785 MHz	31	36		dB	
		1920 to 1980 MHz	47	52		dB	
		2300 to 2400 MHz	37	42		dB	
		2400 to 2500 MHz	38	43		dB	
		2500 to 2570 MHz	41	46		dB	
		2496 to 2690 MHz	41	46		dB	
		4220 to 4340 MHz	34	39		dB	
		4900 to 5950 MHz	10	16		dB	

Typical value at 25±2°C

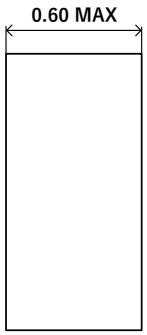
TX to RX Parameters Description		Characteristics			Unit	Notes
		Min	Typ	Max		
Isolation	1920 to 1980 MHz	50	53		dB	
	2110 to 2170 MHz	50	54		dB	

Typical value at 25±2°C

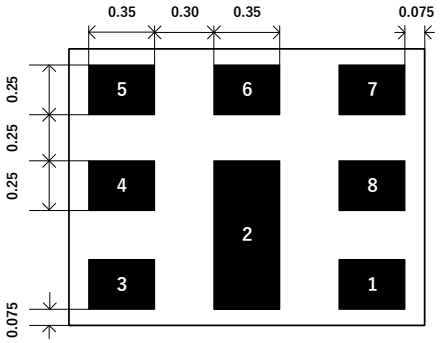
❒ Package Dimensions



Top View



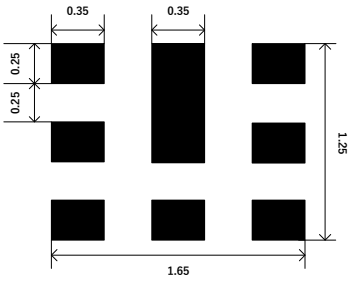
Front View



Bottom View

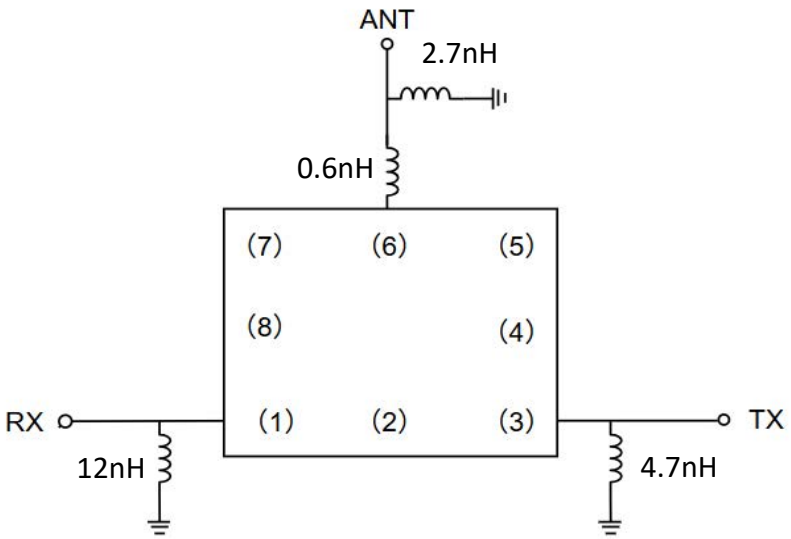
Pin Description	
2,4,5,7,8	Ground
6	Ant
3	Tx
1	Rx

Land Pattern (Top view)



Unit: mm

❒ Testing Environment

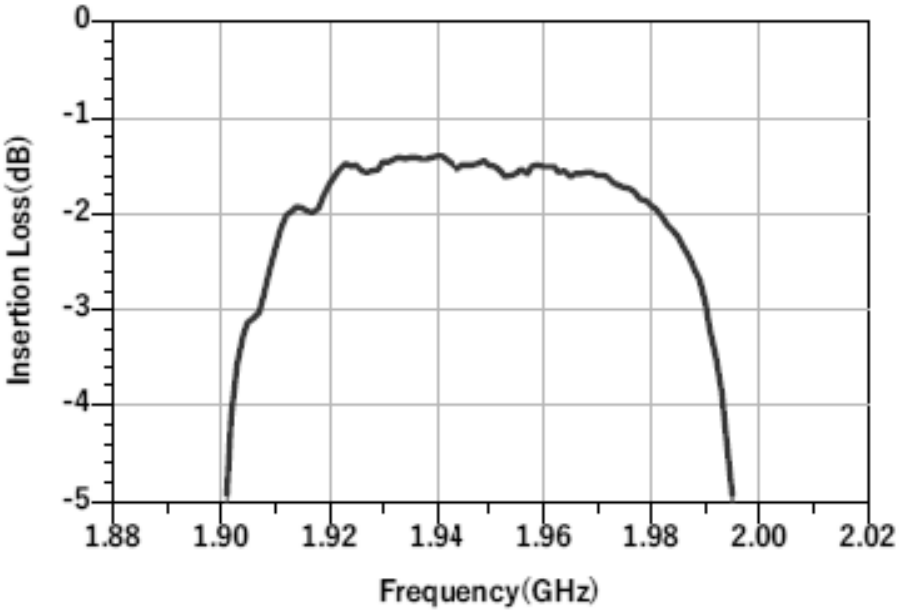


Source & Load Impedance: 50 Ω

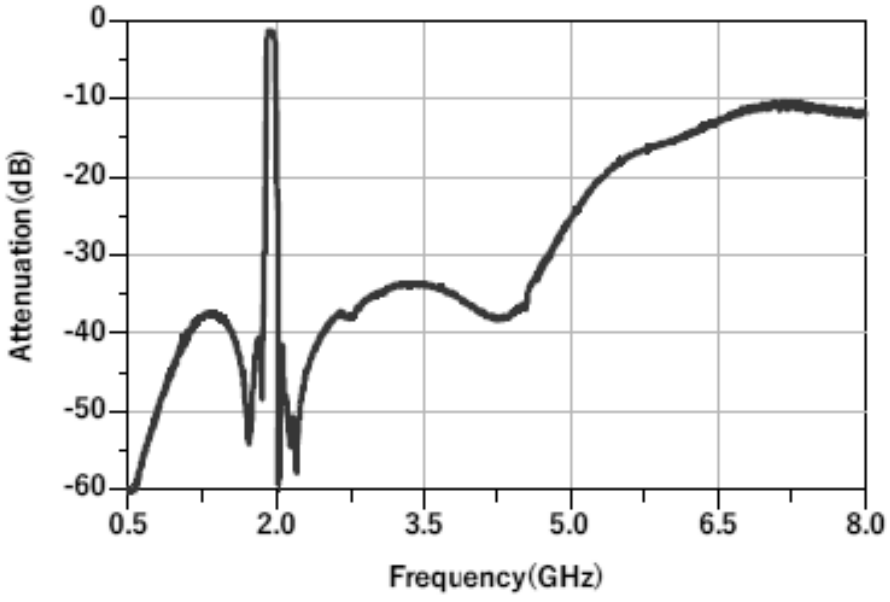
❒ Frequency Characteristics

TX to ANT

Passband

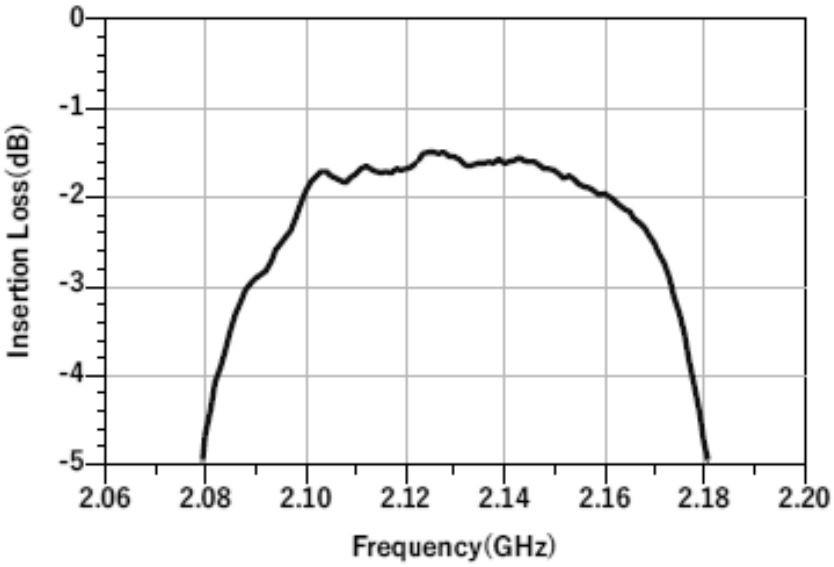


Wideband

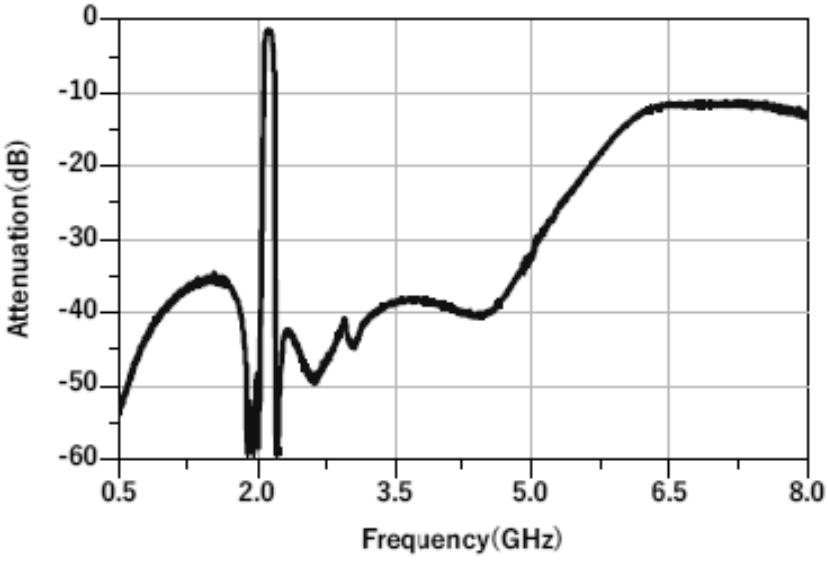


ANT to RX

Passband

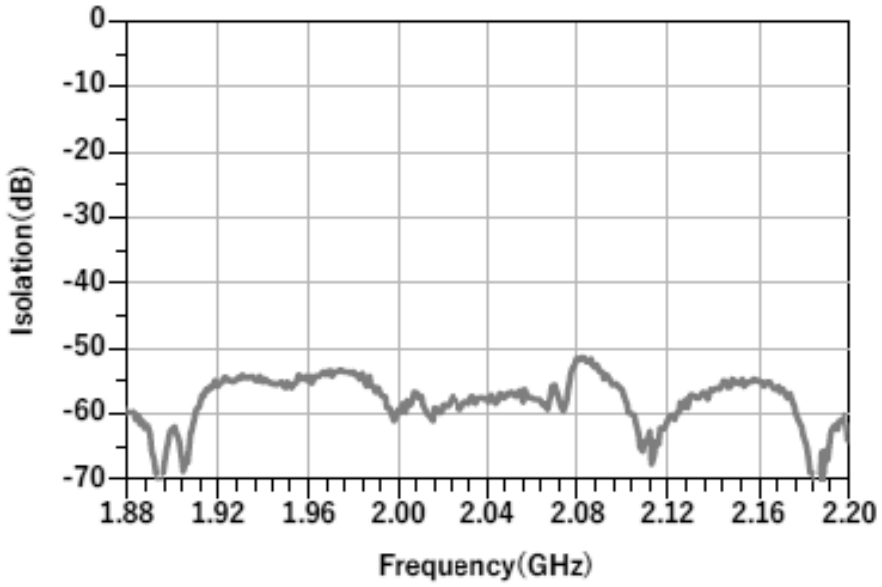


Wideband



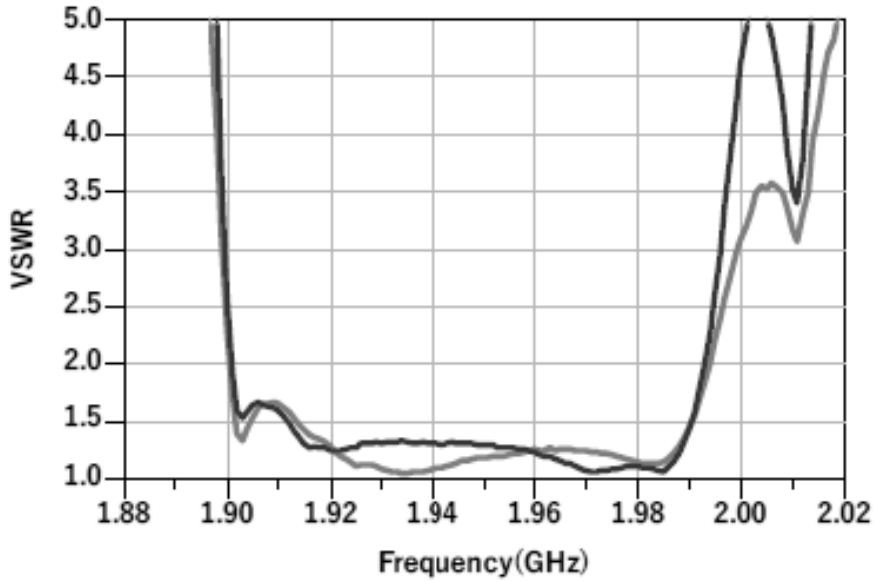
Isolation

TRX Isolation

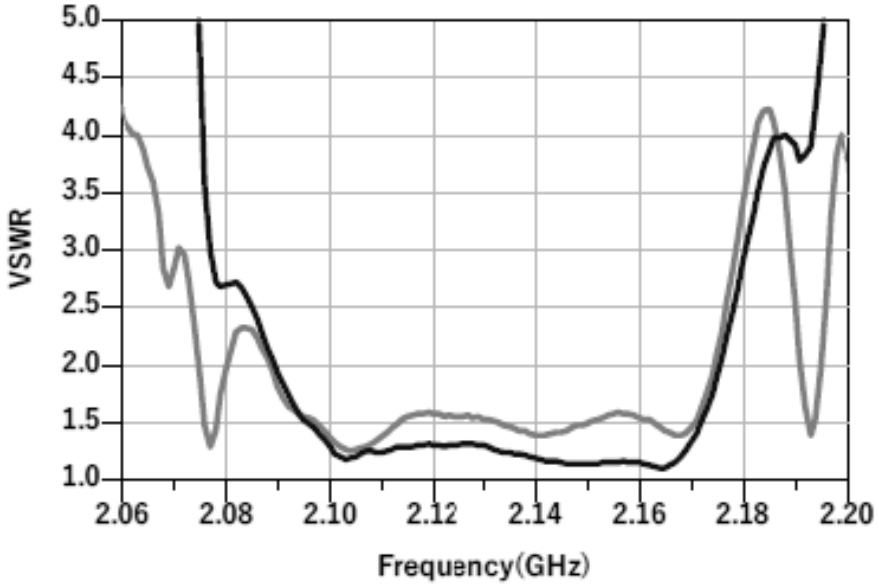


VSWR

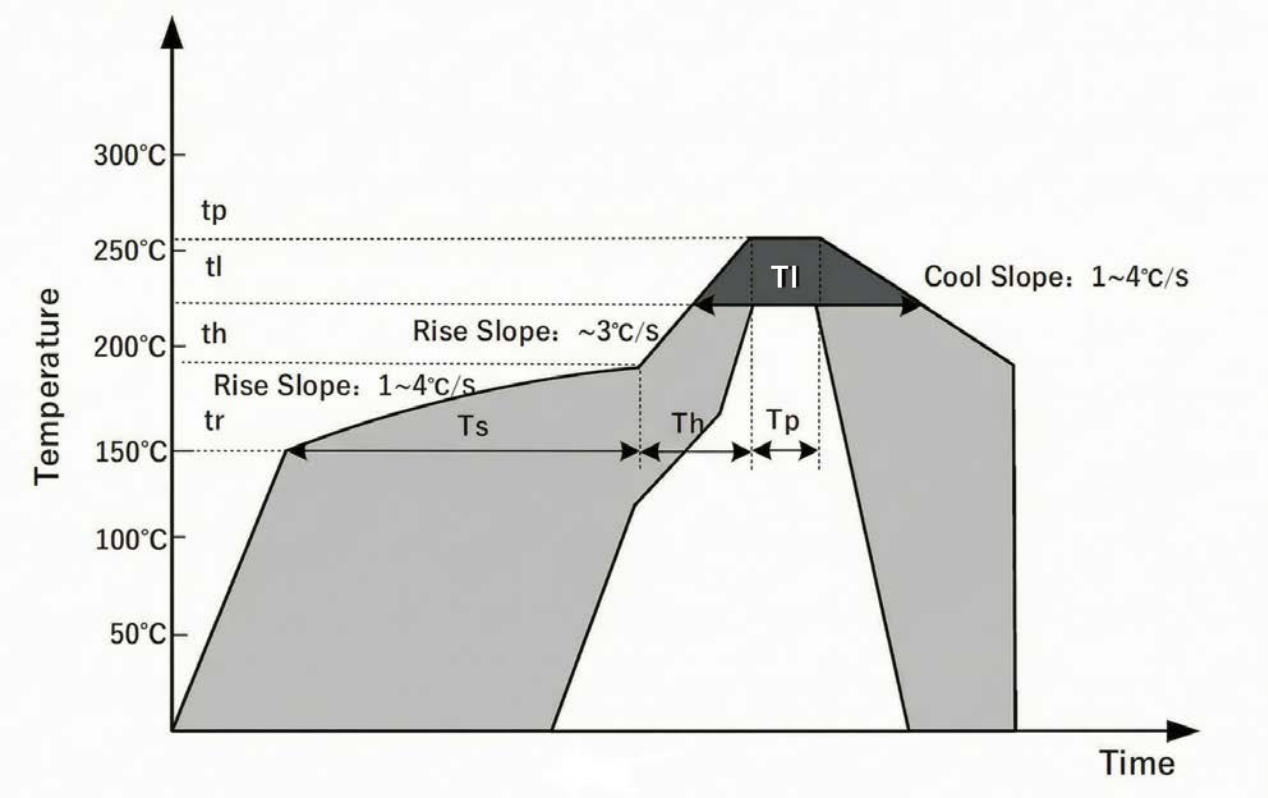
TX/ANT VSWR



RX/ANT VSWR



❒Reflow Condition



Reflow Parameter	Values
Preheating time T_S	50 ~ 110s
Temperature tr	~150°C
Time Th	~30s
Temperature th	~180°C
Peak Time Tp	~10s
Peak Temperature tp	~255°C min
Time Tl	~230°C
Temperature tl	~50s max