SK3010ND

MSL 3 Device

Band 1, SAW Duplexer(Rx Unbalanced Port)
Revision 1 : July 2021

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

❒ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-20	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	3		
Input Power at Tx Port	dBm	30dBm, Ta=+50℃, 5000h, CW		
Antenna Impedance(unbalanced)(1)	Ω	50		
Tx Impedance(unbalanced)(1)	Ω	50		
Rx Impedance (unbalanced)(1)	Ω	50		
Package type	C63			
Length x Width	mm²	1.8 x 1.4		
Height	mm	0.65		

Electrical Specification

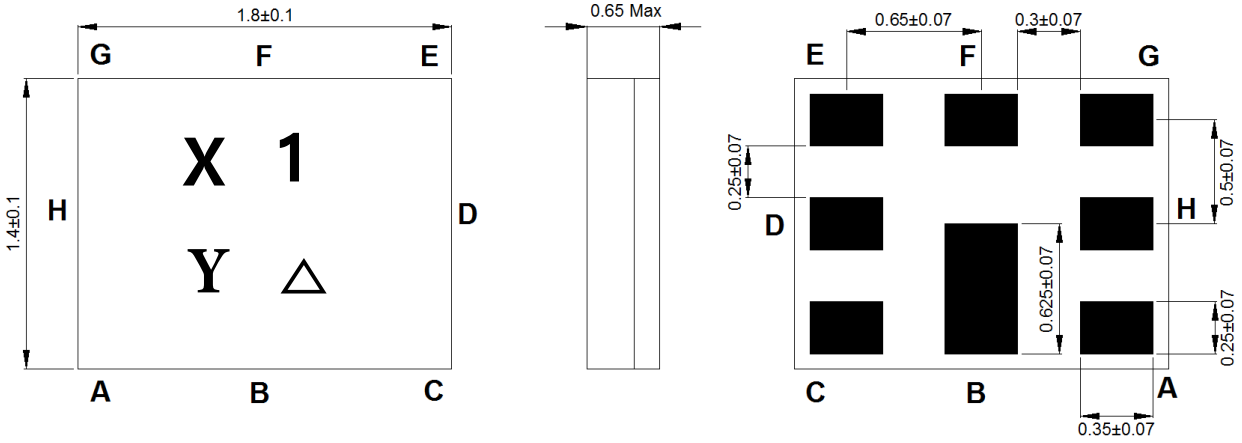
Tx to Ant		Specifications			
Parameters Description	**Condition [MHz]**	**Unit**	**Minimum**	**Typical**	**Maximum**
Insertion Loss	1922.50~ 1977.50	dB	-	1.7	2.1
Ripple Deviation (Over any 5MHz in-band)	1922.50 ~ 1977.50	dB	-	0.6	1.0
VSWR of Tx Port	1920.00 ~ 1980.00	-	-	1.8	2.1
VSWR of Ant. Port	1920.00 ~ 1980.00	-	-	1.7	2.0
Absolute Attenuation	10.00 ~ 1574.00	dB	21	39	-
	420.00 ~ 494.00	dB	40	56	-
	843.00 ~ 894.00	dB	36	43	-
	1559.00 ~ 1563.00	dB	36	39	-
	1565.42 ~ 1573.37	dB	36	39	-
	1573.37 ~ 1577.47	dB	36	39	-
	1577.47 ~ 1585.42	dB	36	39	-
	1597.55 ~ 1605.89	dB	36	39	-
	1605.89 ~ 1805.00	dB	25	39	-
	1710.00 ~ 1785.00	dB	25	42	-
	1805.00 ~ 1880.00	dB	20	44	-
	1880.00 ~ 1890.00	dB	10	32	-
	1890.00 ~ 1895.00	dB	5	20	-
	2010.00 ~ 2025.00	dB	20	30	-
	2110.00 ~ 2170.00	dB	48	54	-
	2400.00 ~ 2500.00	dB	40	49	-
	2620.00 ~ 2690.00	dB	33	47	-
	3840.00 ~ 3960.00	dB	25	30	-
	4900.00 ~ 5950.00	dB	15	28	-
	4905.00 ~ 5845.00	dB	15	28	-
	5760.00 ~ 5940.00	dB	15	28	-
	7680.00 ~ 7920.00	dB	15	19	-

Ant to Rx		Specifications			
Parameters Description	**Condition [MHz]**	**Unit**	**Minimum**	**Typical**	**Maximum**
Insertion Loss	2110.48 ~ 2169.52	dB	-	1.9	2.5
Ripple Deviation (Over any 5MHz in-band)	2110.00 ~ 2170.00	dB	-	0.9	1.3
VSWR of Rx Port	2110.00 ~ 2170.00	-	-	1.7	2.0
VSWR of Ant. Port	2110.00 ~ 2170.00	-	-	2.0	2.3
Absolute Attenuation	1.00 ~ 1920.00	dB	33	42	-
	190.00	dB	50	75	-
	718.00 ~ 748.00	dB	40	52	-
	814.00 ~ 849.00	dB	38	46	-
	880.00 ~ 915.00	dB	39	46	-
	1447.90 ~ 1462.90	dB	39	43	-
	1730.00 ~ 1790.00	dB	37	43	-
	1710.00 ~ 1785.00	dB	37	43	-
	1920.00 ~ 1980.00	dB	50	56	-
	1980.00 ~ 2015.00	dB	16	49	-
	2015.00 ~ 2025.00	dB	5	48	-
	2025.00 ~ 2050.00	dB	5	27	-
	2050.00 ~ 2075.00	dB	5	15	-
	2255.00 ~ 6000.00	dB	6	20	-
	2400.00 ~ 2500.00	dB	36	48	-
	2500.00 ~ 2570.00	dB	38	52	-
	4030.00 ~ 4150.00	dB	15	22	-
	4220.00 ~ 4340.00	dB	11	24	-
	4340.00 ~ 8680.00	dB	6	40	-
	4900.00 ~ 5950.00	dB	6	26	-
	6330.00 ~ 6510.00	dB	15	24	-

Tx to Rx		Specifications			
Parameters Description	**Condition [MHz]**	**Unit**	**Minimum**	**Typical**	**Maximum**
Isolation	1920.00 ~ 1980.00	dB	53	55	-
	1922.50 ~ 1977.50	dB	53	55	-
	2110.00 ~ 2170.00	dB	51	53	-
	2112.50 ~ 2167.5.00	dB	51	53	-

Notes : (1) With Matching Network

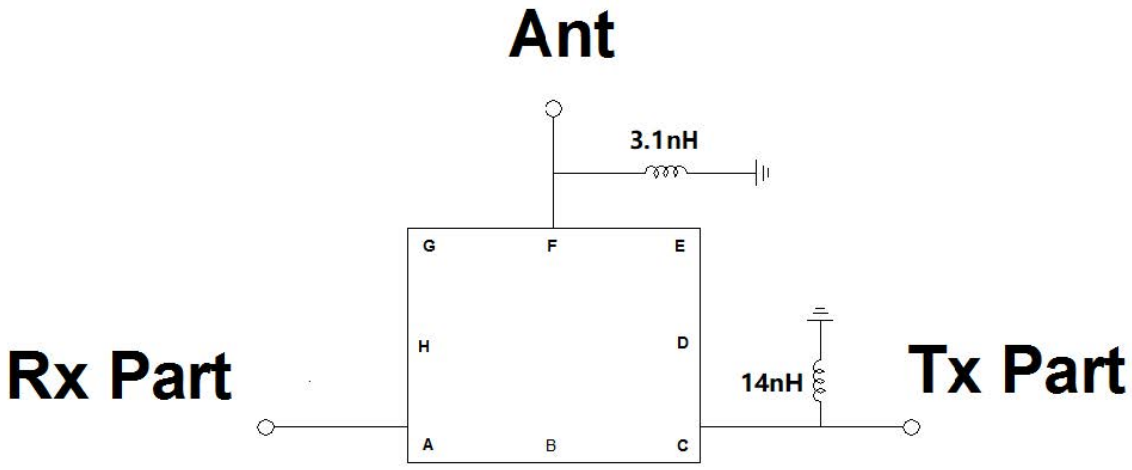
❒ Package Dimensions



Marking Descriptions	
X	S or W
1	Band Class
Y	Series Number
△	Date Code(Year+Month)

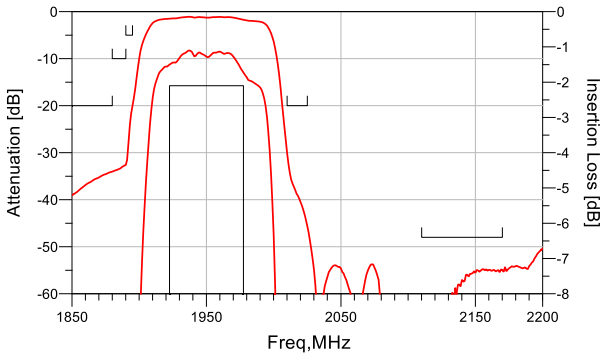
Pin Description	
B,D,E,G,H	Ground
F	Ant
C	Tx (1950.0MHz)
A	Rx (2140.0MHz)

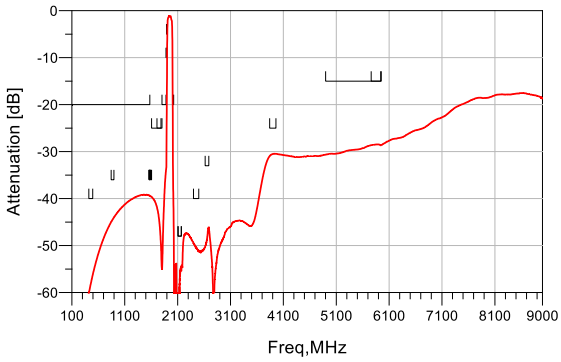
❒ Testing Environment



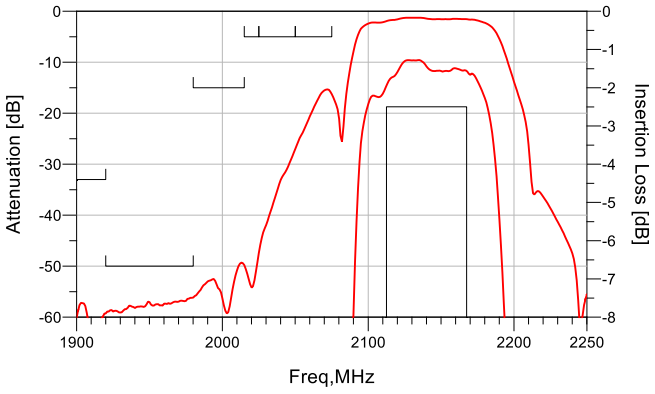
❒ Frequency Characteristics

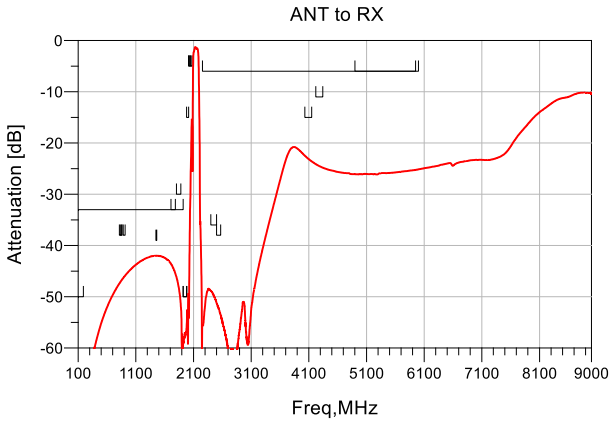
Tx to Ant



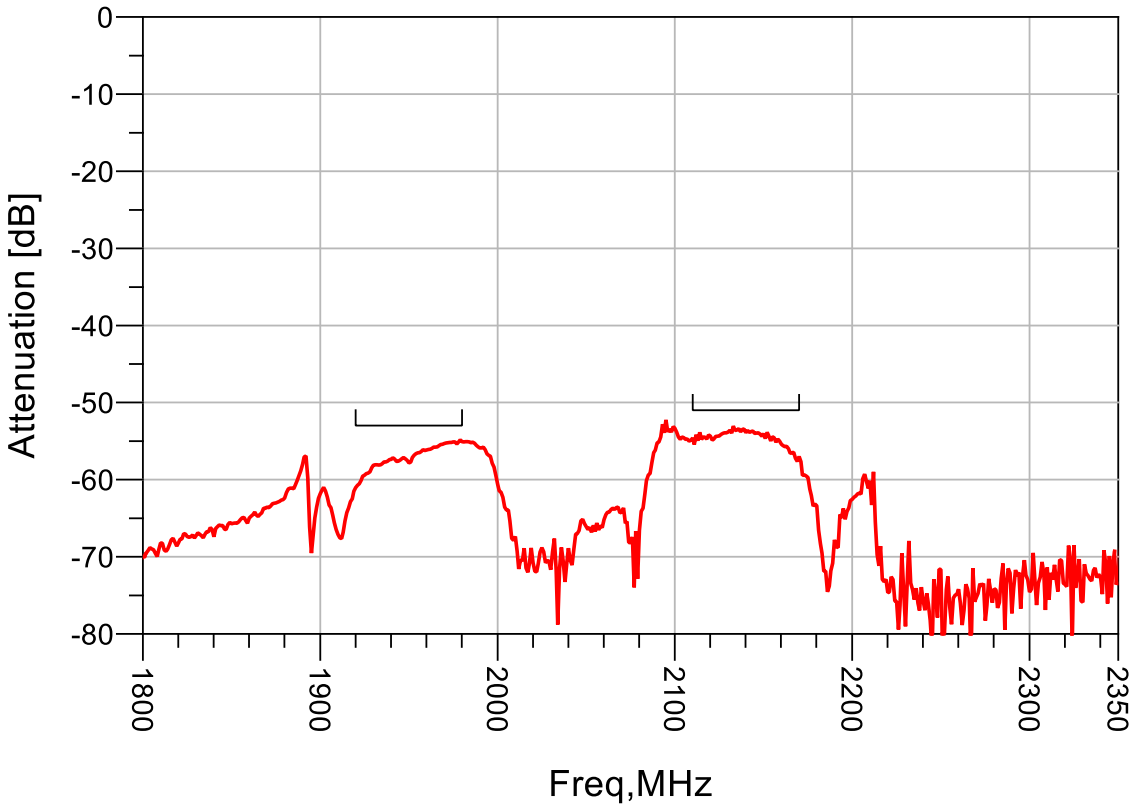


Ant to Rx





Isolation


0
-10
-20
-30
-40
-50
-60
-70
-80
Attenuation [dB]
1800
1900
2000
2100
2200
2300
2350
Freq,MHz