

# SD-071003-S33

SAW Duplexer For 710MHz / 740MHz  
Revision 0: July 2014



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



**□ Electrical Characteristics**

**Maximum Ratings**

ITEM	UNIT	MIN.	TYP.	MAX.
Operation Temperature Range	°C	-20	-	+100
Storage Temperature Range	°C	-40	-	+100
Maximum DC Voltage	V	0		
Tx Band Maximum Input Power Level	dBm	30dBm > 50000 Hours, CW tone(Ta= +50°C)		
Rx Band Maximum Input Power Level	dBm	30dBm > 50000 Hours, CW tone(Ta= +50°C)		
Ant. Tx. Rx Terminating Impedance	Ω	50 Ω		
Package type		S33		
Length x Width	mm <sup>2</sup>	3.8 x 3.8		
Height	mm	-	-	1.45

**Electrical Specification**

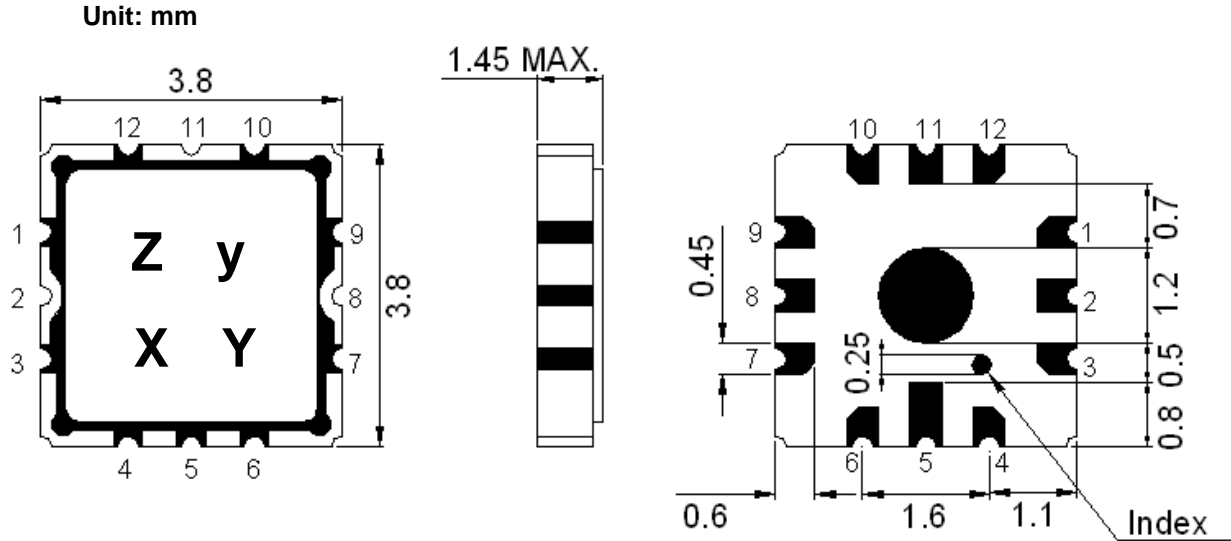
Tx_710.0MHz		SPECIFICATIONS			
ITEM	CONDITION [MHz]	Unit	Min.	Typ.	Max.
Insertion Loss	704.0 ~ 716.0	dB	-	2.2	3.5
Bandwidth	704.0 ~ 716.0	MHz	12	20	-
Ripple	704.0 ~ 716.0	dB <sub>p-p</sub>	-	1.0	2.0
Return Loss	704.0 ~ 716.0	dB	9.0	12	-
Absolute Attenuation	725.0	dB	12	15	-
	734.0 ~ 746.0	dB	45	54	-
	873.0 ~ 885.0	dB	40	42	-
	1042.0 ~ 1054.0	dB	45	48	-
	1468.0 ~ 1432.0	dB	40	46	-
	2112.0 ~ 2148.0	dB	30	42	-



Rx_740.0MHz		SPECIFICATIONS			
ITEM	CONDITION [MHz]	Unit	Min.	Typ.	Max.
<b>Insertion Loss</b>	734.0 ~ 746.0	dB	-	1.5	3.5
<b>Bandwidth</b>	734.0 ~ 746.0	MHz	12	18	-
<b>Ripple</b>	734.0 ~ 746.0	dB <sub>p-p</sub>	-	0.9	2.0
<b>Return Loss</b>	734.0 ~ 746.0	dB	9.0	11	-
<b>Absolute Attenuation</b>	D.C. ~ 636.0	dB	35	40	-
	725.0	dB	12	20	-
	776.0 ~ 1000.0	dB	35	44	-
	1000.0 ~ 2000.0	dB	35	42	-
	2000.0 ~ 3000.0	dB	10	16	-
	704.0 ~ 716.0	dB	45	50	-
	664.0 ~ 676.0	dB	35	42	-
	594.0 ~ 606.0	dB	35	40	-
869.0 ~ 894.0	dB	35	46	-	
Rx → Tx		SPECIFICATIONS			
ITEM	CONDITION [MHz]	Unit	Min.	Typ.	Max.
<b>Isolation</b>	D.C. ~ 704.0	dB	45	51	-
	704.0 ~ 716.0	dB	48	50	-
	725.0	dB	35	40	-
	734.0 ~ 746.0	dB	50	60	-
	747.0 ~ 1000.0	dB	40	55	-
	1000.0 ~ 2000.0	dB	35	44	-
	2000.0 ~ 3000.0	dB	10	14	-

\*Note : Including losses due to Test PCB(0.3dB)

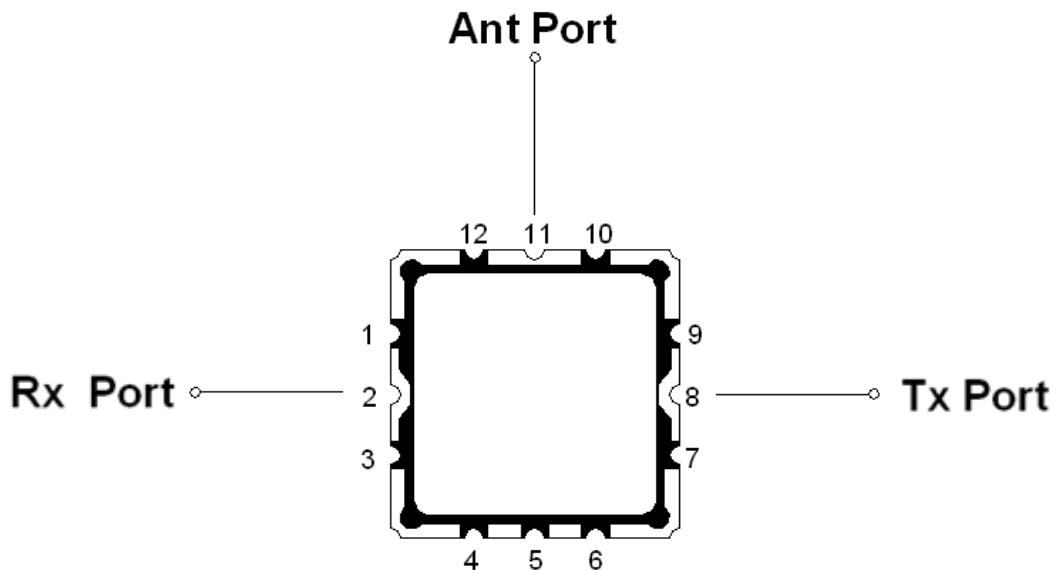
**□ Package Dimensions**



Marking Descriptions	
Z	Wireless Application
y	Series Number
X	Date Code(Year)
Y	Date Code(Month)

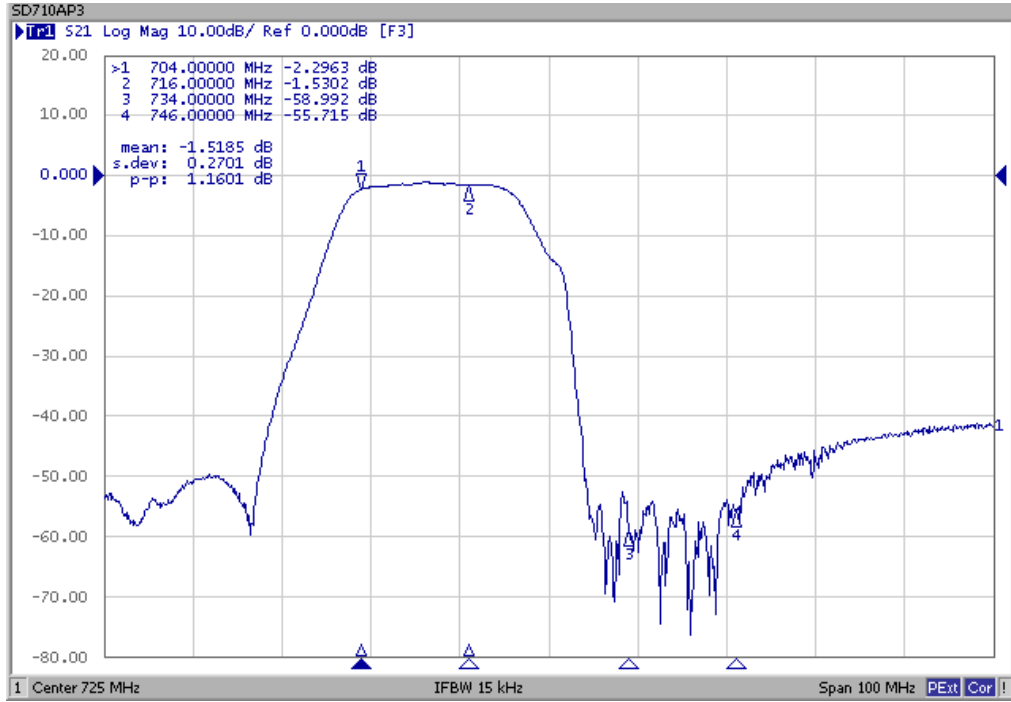
Pin Description	
the others	Ground
2	Rx Port(740.0MHz)
11	Antenna
8	Tx Port (710.0MHz)

**□ Testing Environment**

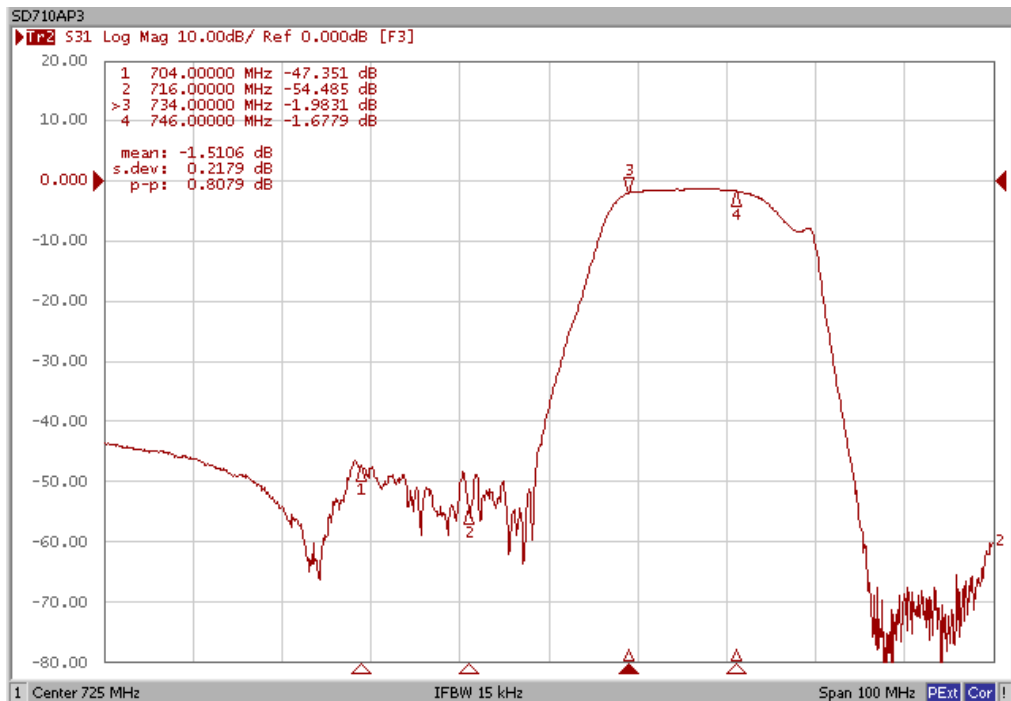


### □ Frequency Characteristics

#### Tx Characteristic

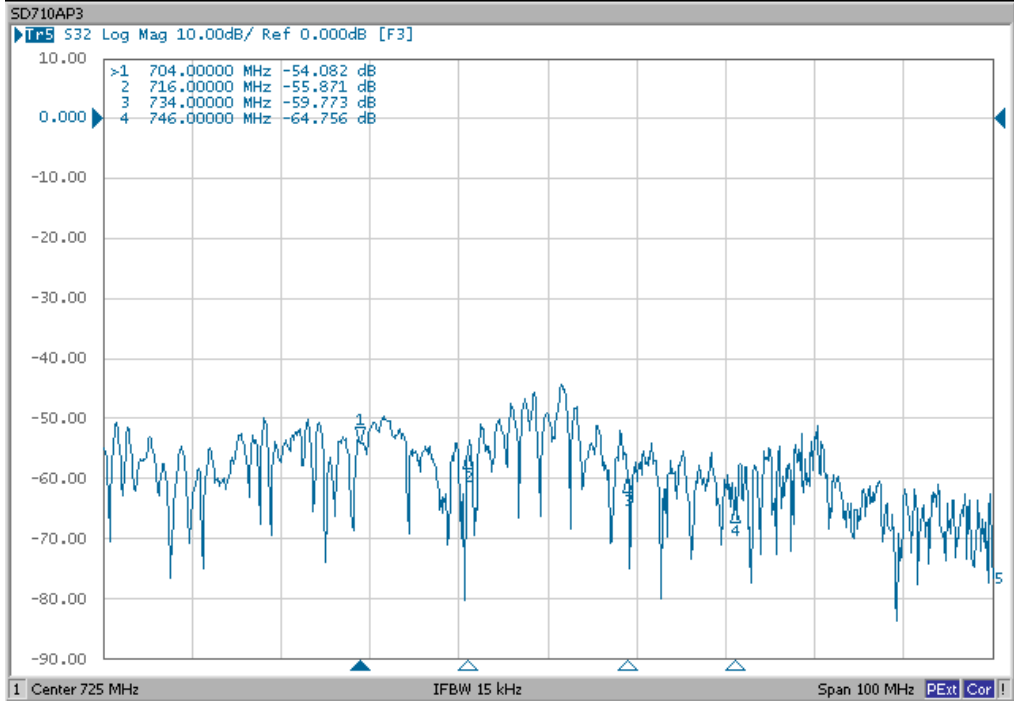


#### Rx Characteristic



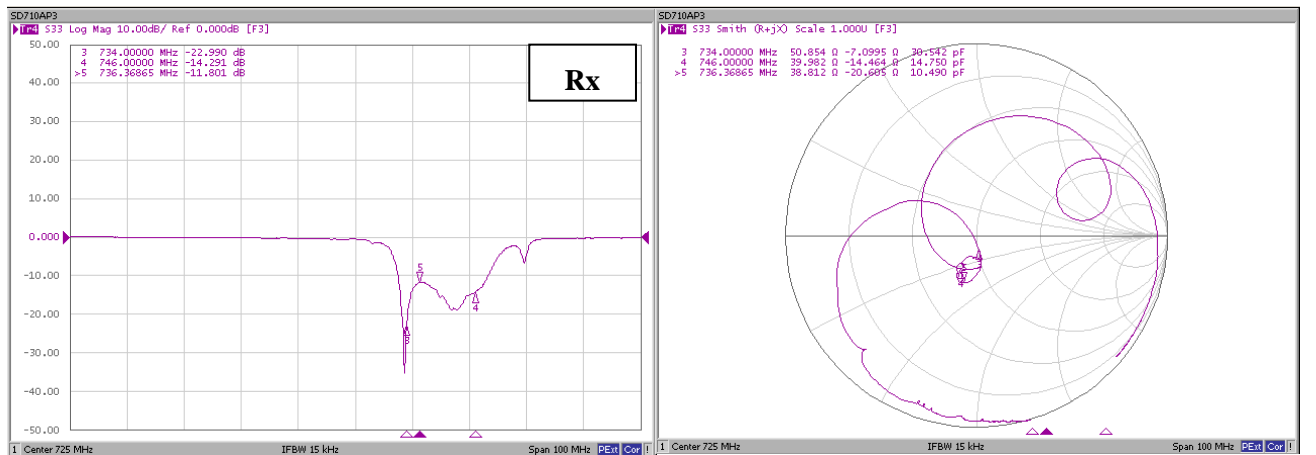
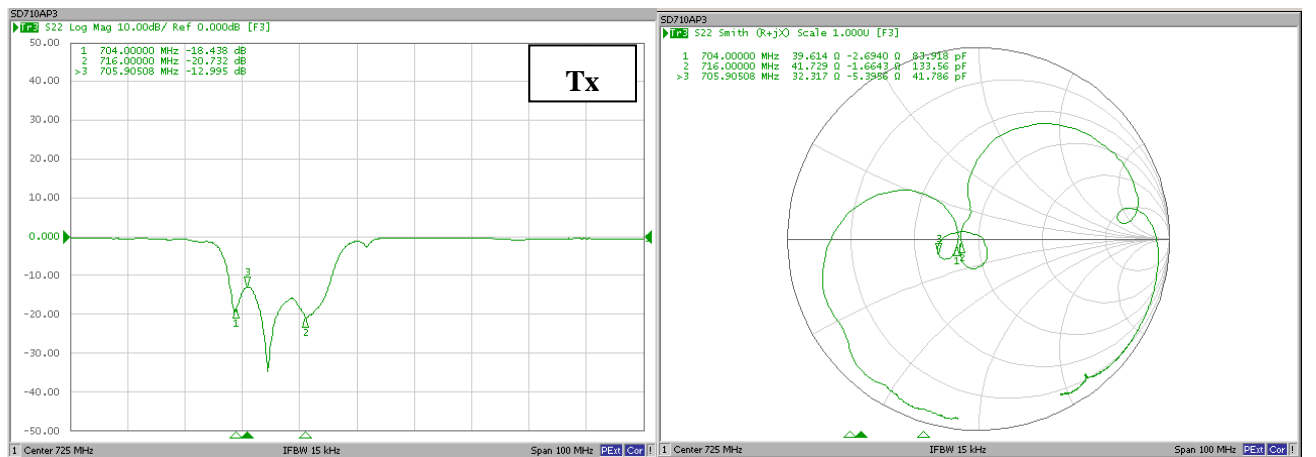
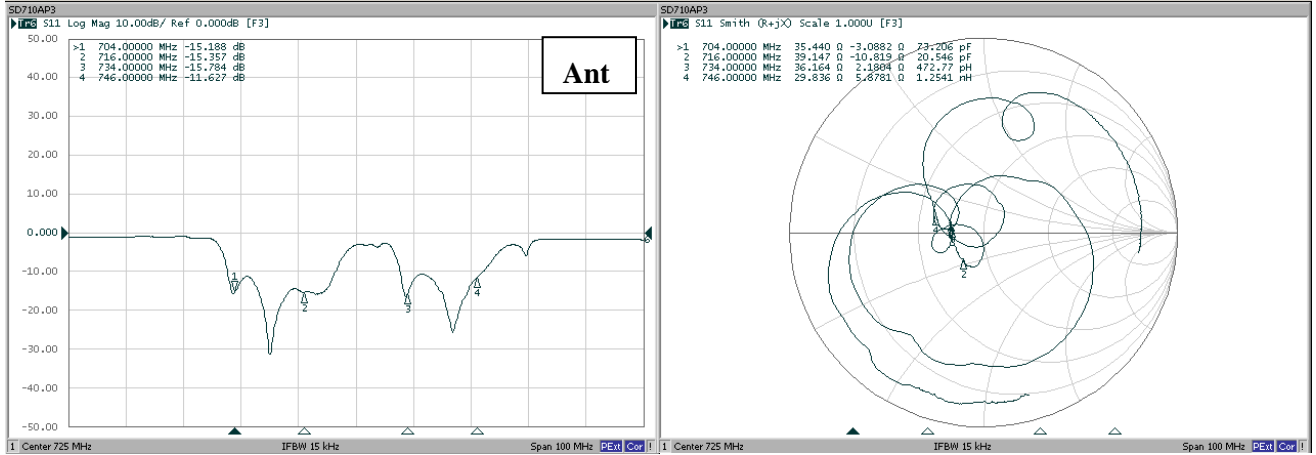


Isolation Characteristic





### Return Loss & Smith Chart Characteristic





### Wide Span Characteristic

