



Total Solution Provider in Saw Device

SD453BK3

CDMA450 H-Band, SAW Duplexer
Revision 1: December 2005



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

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□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-10	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	0		
Maximum Input Power	W	1.0 W > 50000 Hours, CW tone(Ta= +50°C)		
Source Impedance (single ended) ⁽¹⁾	Ω	50		
Load Impedance (single ended) ⁽¹⁾	Ω	50		
Package type & size	K3			
Length x Width	mm ²	-	5.0 x 5.0	-
Height	mm	-	-	1.8

Electrical Specification

Tx → Ant		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Center Frequency	H Block	dB	-	453.52	-
Insertion Loss	451.69 ~ 455.41	dB	-	2.5	3.2
	451.31 ~ 455.73	dB	-	2.5	3.8
Amplitude Ripple	451.69 ~ 455.41	dB	-	0.9	1.5
	451.31 ~ 455.73	dB	-	0.9	2.0
Return Loss Tx Input	451.69 ~ 455.41	dB	10.0	14.0	-
	451.31 ~ 455.73	dB	9.0	13.0	-
Return Loss Antenna Input	451.31 ~ 455.73	dB	8.0	10.0	-
Rx Band Rejection	461.69 ~ 465.41	dB	50.0	54.0	-
	461.31 ~ 465.73	dB	40.0	50.0	-
Absolute Attenuation	0.3 ~ 350.0	dB	40.0	48.0	-
	350.0 ~ 440.0	dB	30.0	36.0	-
	465.73 ~ 750.0	dB	30.0	37.0	-
	750.0 ~ 1100.0	dB	30.0	40.0	-
	1100.0 ~ 1300.0	dB	25.0	39.0	-
	1300.0 ~ 1600.0	dB	20.0	25.0	-
	1600.0 ~ 2000.0	dB	8.0	15.0	-
	1574.0 ~ 1577.0	dB	20.0	25.0	-



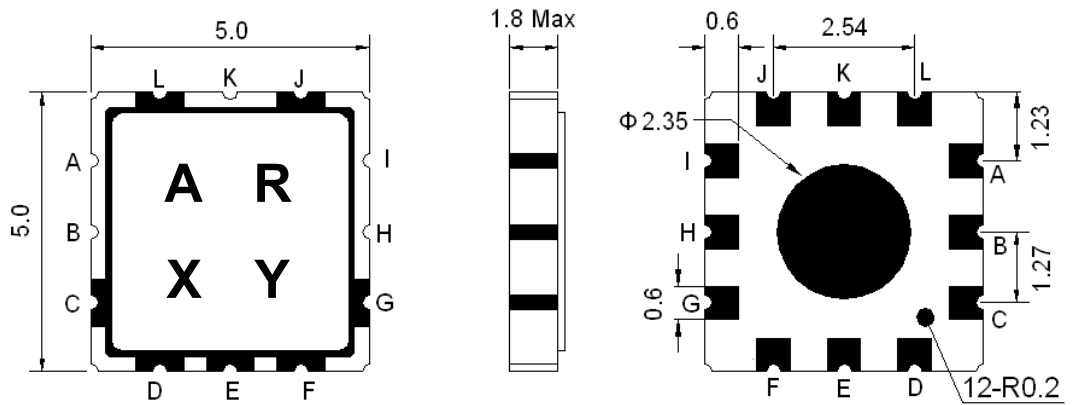
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CDMA450 H-Band, SAW DUPLEXER

Ant → Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Center Frequency	H Block	MHz	-	463.52	-
Insertion Loss	461.69 ~ 465.41	dB	-	2.8	3.5
	461.31 ~ 465.73	dB	-	3.0	4.0
Amplitude Ripple	461.69 ~ 465.41	dB	-	0.8	1.5
	461.31 ~ 465.73	dB	-	1.0	2.0
Return Loss Antenna	461.31 ~ 465.73	dB	9.0	11.0	-
Return Loss Rx Output	461.31 ~ 465.73	dB	10.0	13.0	-
Tx Band Rejection	451.69 ~ 455.41	dB	50.0	53.0	-
	451.31 ~ 455.73	dB	45.0	53.0	-
Absolute Attenuation	0.3 ~ 451.31	dB	45.0	60.0	-
	475.5 ~ 479.5	dB	20.0	27.0	-
	479.5 ~ 750.0	dB	35.0	40.0	-
	750.0 ~ 1100.0	dB	40.0	45.0	-
	1100.0 ~ 2000.0	dB	20.0	25.0	-

Tx → Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Rx Band Rejection	461.69 ~ 465.41	dB	50.0	56.0	-
	461.31 ~ 465.73	dB	45.0	55.0	-
Tx Band Rejection	451.69 ~ 455.41	dB	50.0	53.0	-
	451.31 ~ 455.73	dB	48.0	53.0	-
Absolute Attenuation	0.3 ~ 350.0	dB	60.0	70.0	-
	350.0 ~ 451.31	dB	48.0	60.0	-
	465.73 ~ 479.5	dB	40.0	50.0	-
	479.5 ~ 750.0	dB	50.0	60.0	-
	750.0 ~ 1600.0	dB	35.0	40.0	-
	1600.0 ~ 2000.0	dB	25.0	33.0	-

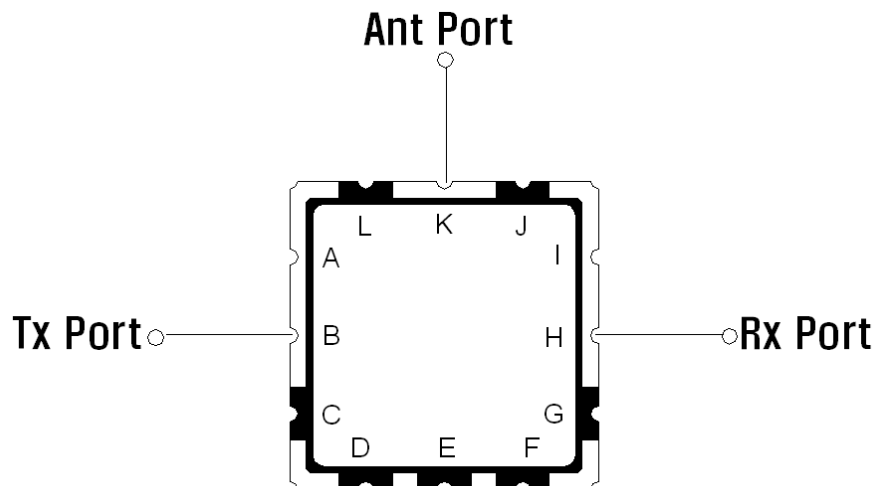
Package Dimensions



Marking Descriptions	
A	CDMA450 Application
R	Series Number
X	Date Code(Year)
Y	Date Code(Month)

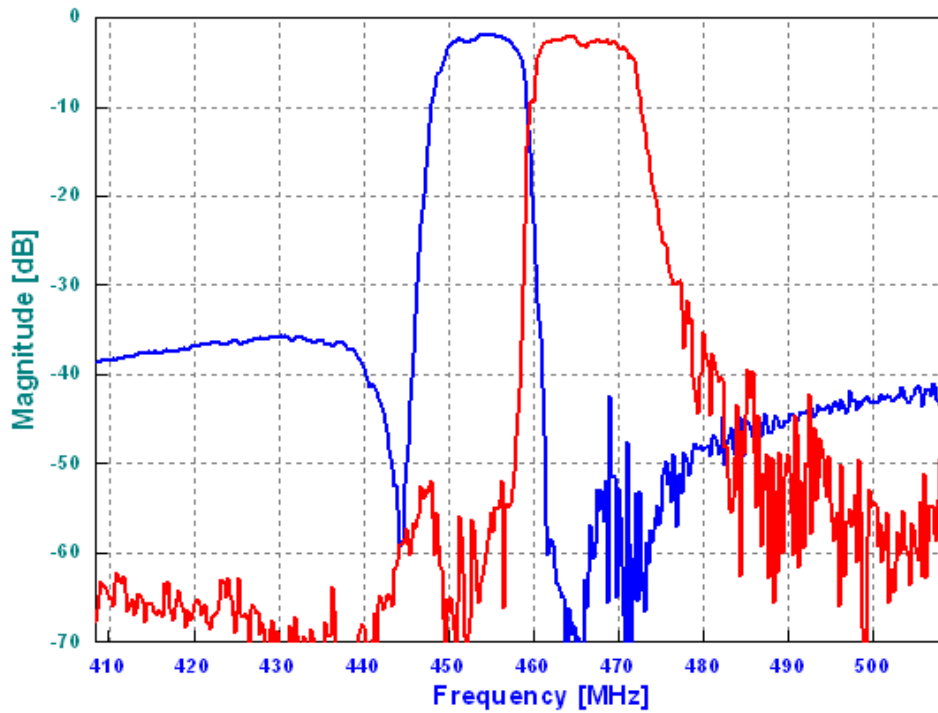
Pin Description	
A, C, D, E, F, G, I, J, L	Ground
H	Receiver
K	Antenna
B	Transmitter

Testing Environment

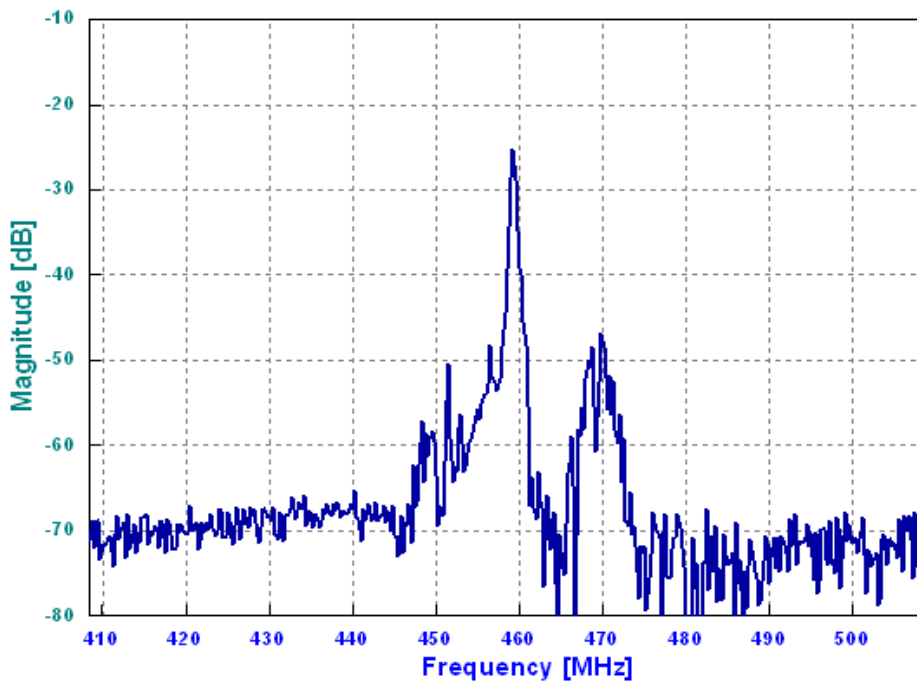


□ Frequency Characteristics

Tx to Ant, Ant to Rx



Tx to Rx Isolation

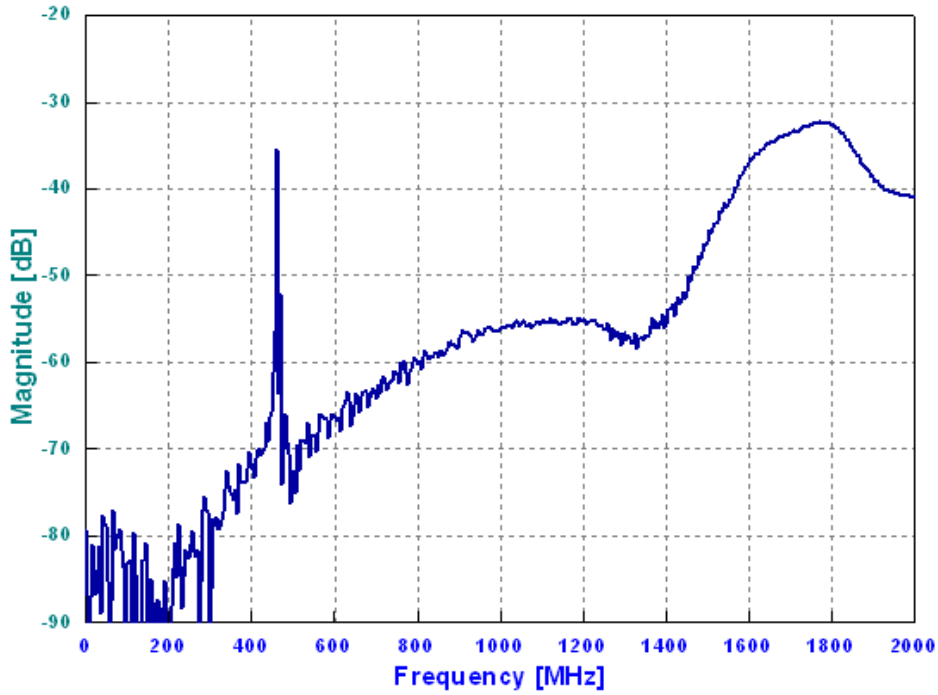




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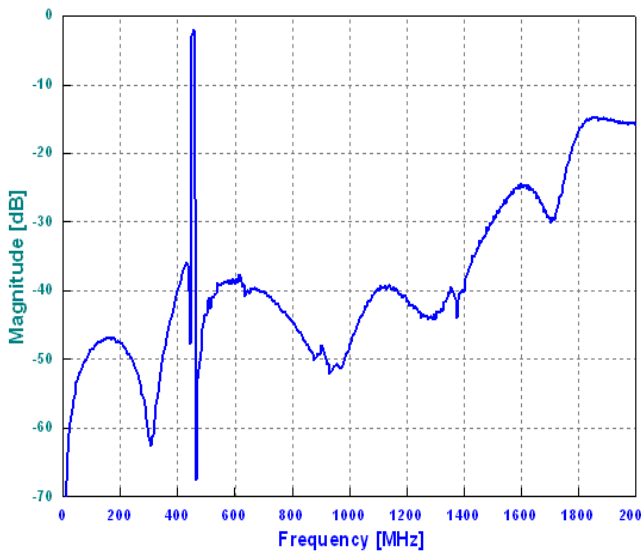
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Tx to Rx Isolation Wide Band

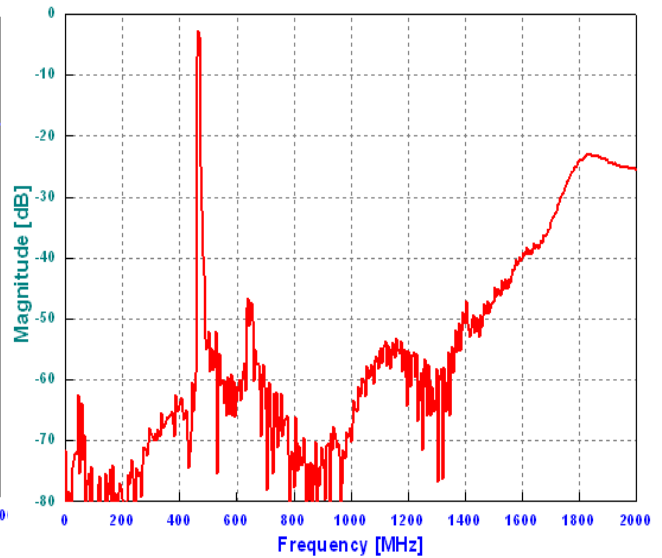


Wide Band

Return Loss



Smith Chart

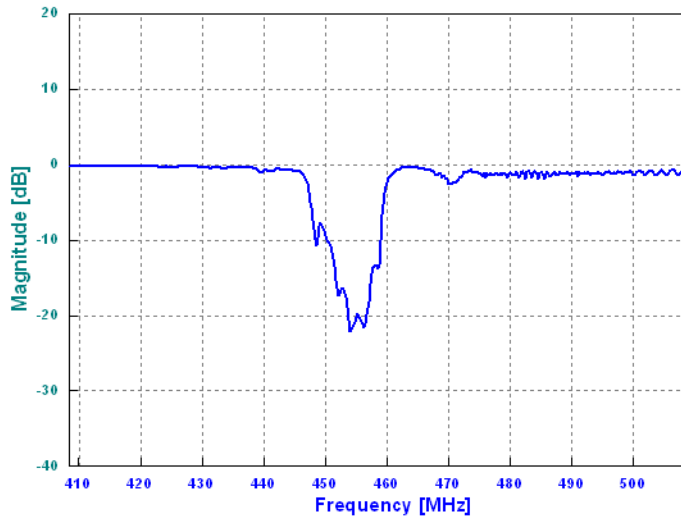


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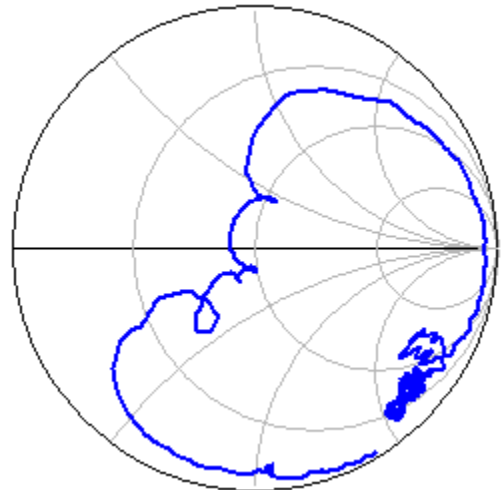
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Tx Port

Return Loss

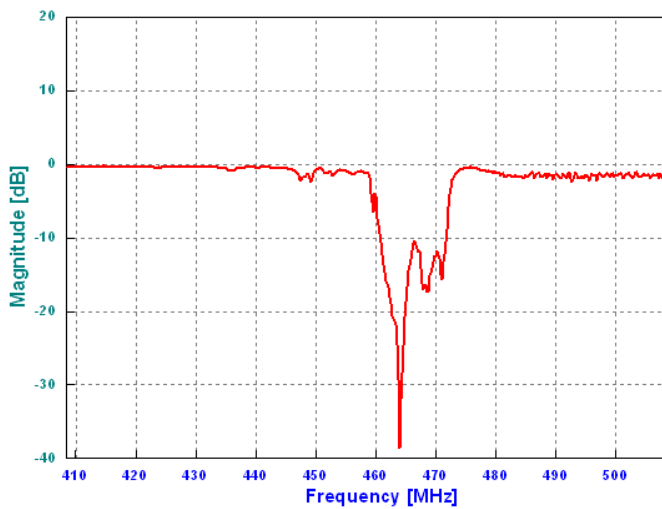


Smith Chart

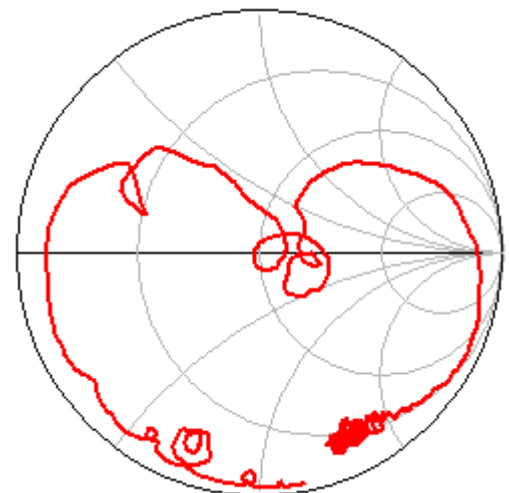


Rx Port

Return Loss

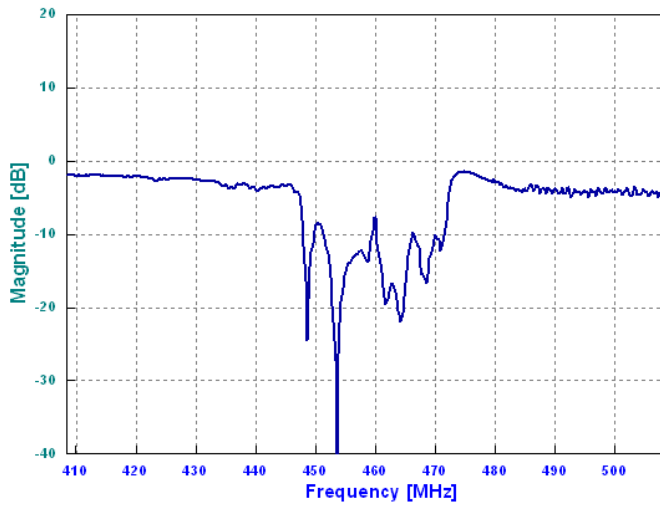


Smith Chart



Ant Port

Return Loss



Smith Chart

