



*Total Solution Provider in Saw Device*

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# SD455BK3

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



- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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# SD455BK3

CDMA450 A-Band, SAW DUPLEXER

## □ 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) <sup>(1)</sup>	Ω	50		
Load Impedance (single ended) <sup>(1)</sup>	Ω	50		
Package type & size	K3			
Length x Width	mm <sup>2</sup>	-	5.0 x 5.0	-
Height	mm	-	-	1.8

### Electrical Specification

Tx → Ant		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Center Frequency	A Block	MHz	-	455.0	-
Insertion Loss	453.36 ~ 457.09	dB	-	2.6	3.2
	452.5 ~ 457.475	dB	-	2.6	3.8
Amplitude Ripple	453.36 ~ 457.09	dB	-	0.9	1.5
	452.5 ~ 457.475	dB	-	0.9	2.0
Return Loss Tx Input	453.36 ~ 457.09	dB	10.0	14.0	-
	452.5 ~ 457.475	dB	9.0	14.0	-
Return Loss Antenna Input	452.5 ~ 457.475	dB	8.0	10.0	-
Rx Band Rejection	462.5 ~ 463.36	dB	40.0	56.0	-
	463.36 ~ 467.09	dB	50.0	56.0	-
	467.09 ~ 467.475	dB	48.0	56.0	-
Absolute Attenuation	0.3 ~ 350.0	dB	40.0	50.0	-
	350.0 ~ 420.0	dB	30.0	37.0	-
	420.0 ~ 440.0	dB	30.0	36.0	-
	467.475 ~ 750.0	dB	30.0	38.0	-
	750.0 ~ 1100.0	dB	30.0	40.0	-
	1100.0 ~ 1400.0	dB	30.0	40.0	-
	1400.0 ~ 1600.0	dB	15.0	25.0	-
	1600.0 ~ 2000.0	dB	8.0	16.0	-
1574.0 ~ 1577.0	dB	20.0	25.0	-	



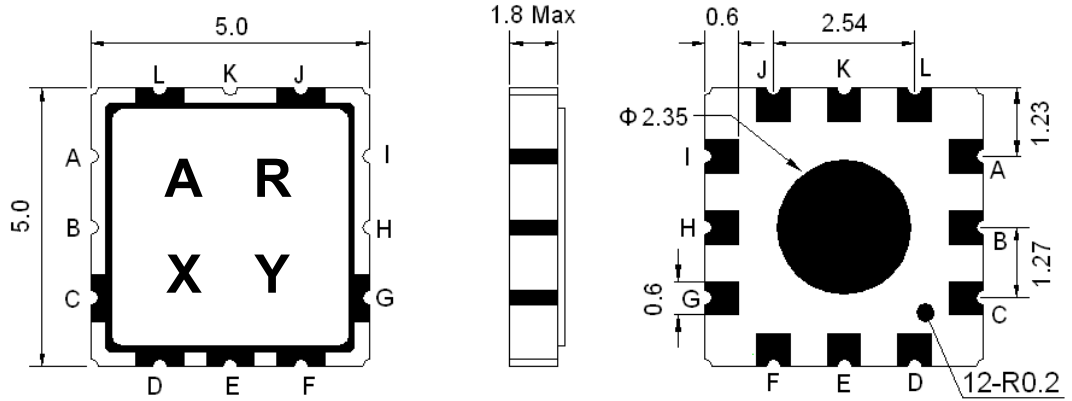
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### CDMA450 A-Band, SAW DUPLEXER

Ant → Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Center Frequency	A Block	MHz	-	465.0	-
Insertion Loss	463.36 ~ 467.09	dB	-	2.8	3.5
	462.5 ~ 467.475	dB	-	3.0	4.0
Amplitude Ripple	463.36 ~ 467.09	dB	-	0.8	1.5
	462.5 ~ 467.475	dB	-	1.0	2.0
Return Loss Antenna	462.5 ~ 467.475	dB	8.0	10.0	-
Return Loss Rx Output	462.5 ~ 467.475	dB	9.0	11.0	-
Tx Band Rejection	453.36 ~ 457.09	dB	50.0	54.0	-
	452.5 ~ 457.475	dB	47.0	54.0	-
Absolute Attenuation	0.3 ~ 452.5	dB	45.0	60.0	-
	477.0 ~ 481.0	dB	20.0	28.0	-
	481.0 ~ 750.0	dB	35.0	42.0	-
	750.0 ~ 1100.0	dB	40.0	45.0	-
	1100.0 ~ 1400.0	dB	40.0	45.0	-
	1400.0 ~ 2000.0	dB	20.0	25.0	-

Tx → Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Rx Band Rejection	462.5 ~ 463.36	dB	42.0	58.0	-
	463.36 ~ 467.09	dB	50.0	55.0	-
	467.09 ~ 467.475	dB	48.0	55.0	-
Tx Band Rejection	453.36 ~ 457.09	dB	51.0	55.0	-
	452.5 ~ 457.475	dB	50.0	55.0	-
Absolute Attenuation	0.3 ~ 350.0	dB	60.0	68.0	-
	350.0 ~ 452.5	dB	48.0	58.0	-
	467.475 ~ 481.0	dB	40.0	50.0	-
	481.0 ~ 750.0	dB	50.0	60.0	-
	750.0 ~ 1600.0	dB	35.0	40.0	-
	1600.0 ~ 2000.0	dB	25.0	35.0	-

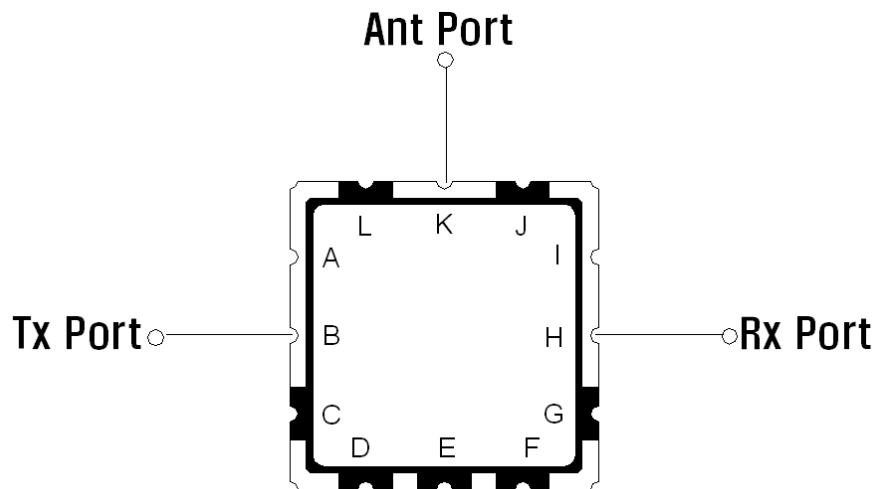
**Package Dimensions**



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

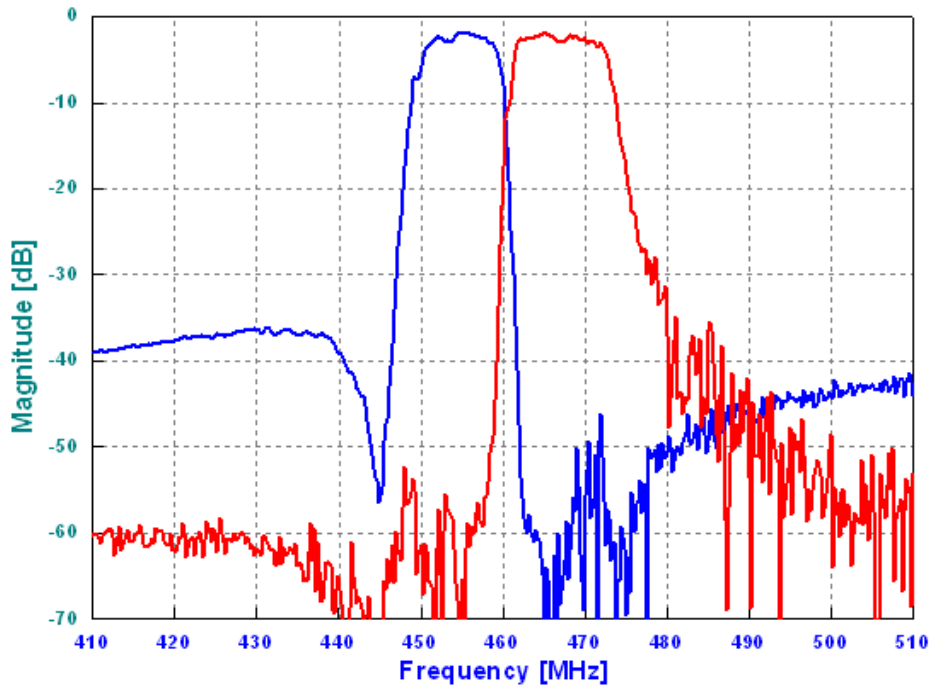
Pin Description	
A, C, D, E, F, G, I, J, L	Ground
H	Receiver
K	Antenna
B	Transmitter

**Testing Environment**

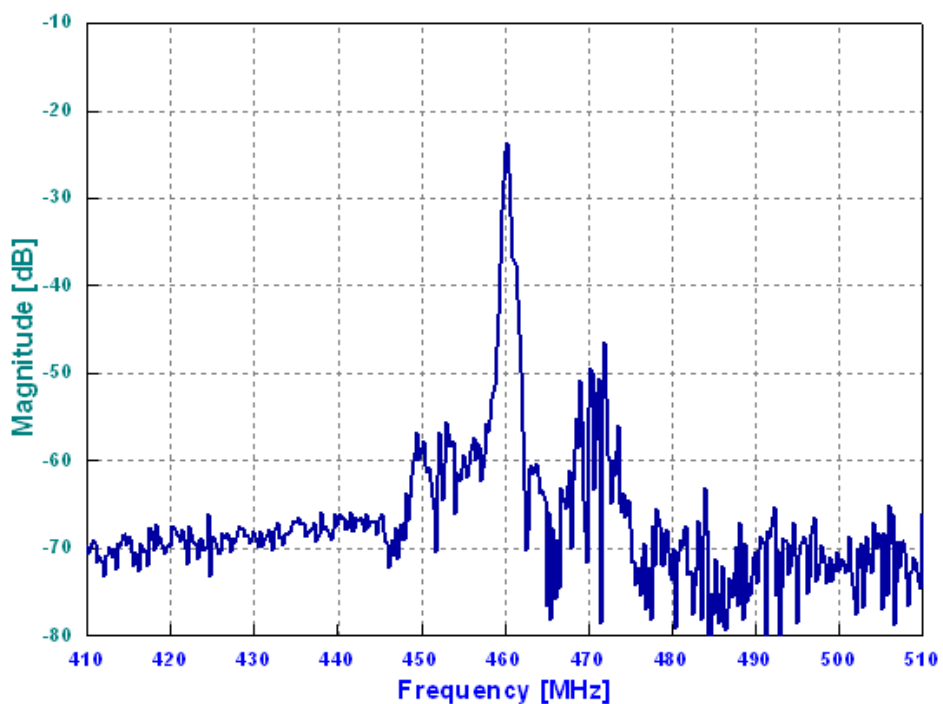


### □ Frequency Characteristics

Tx to Ant, Ant to Rx



Tx to Rx Isolation

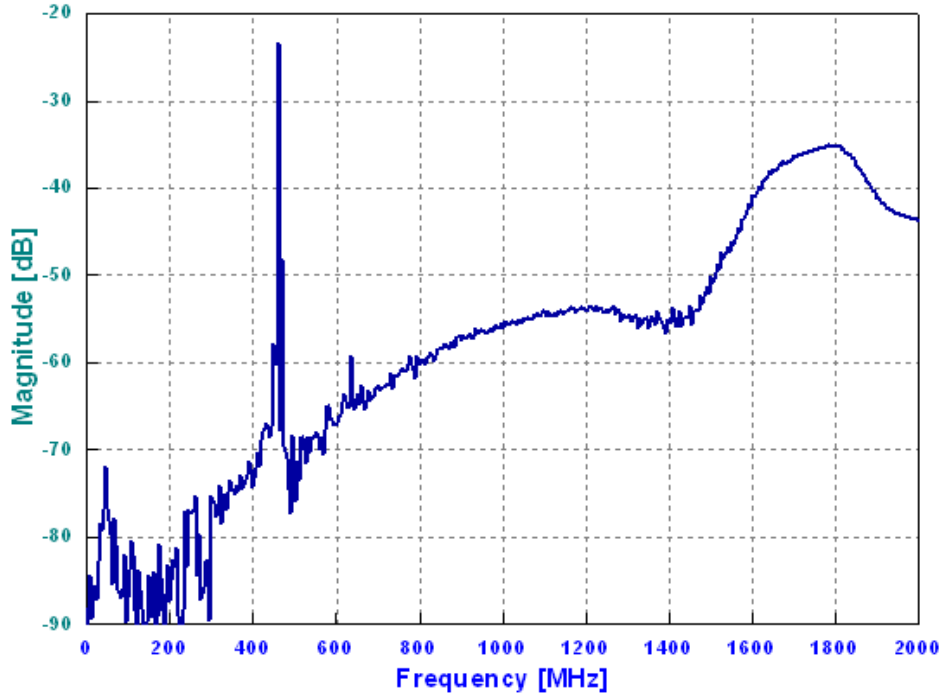




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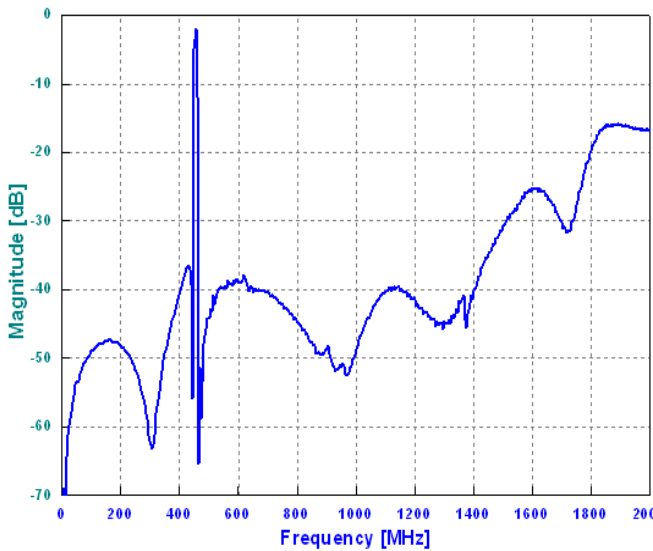
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Tx to Rx Isolation Wide Band

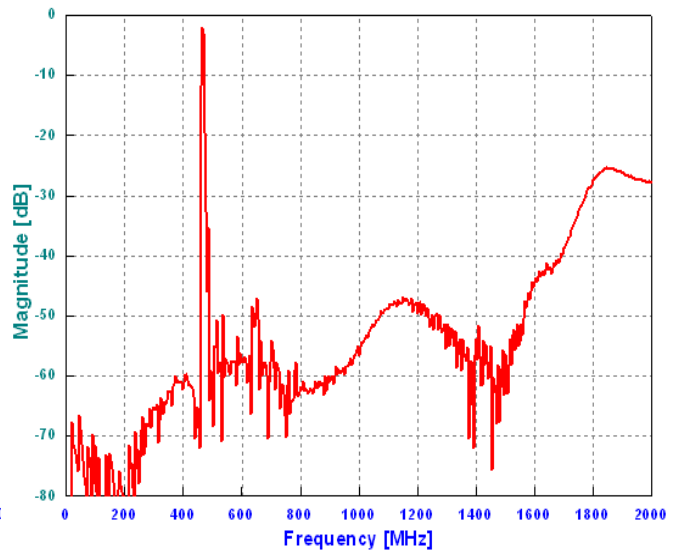


Wide Band

Return Loss



Smith Chart

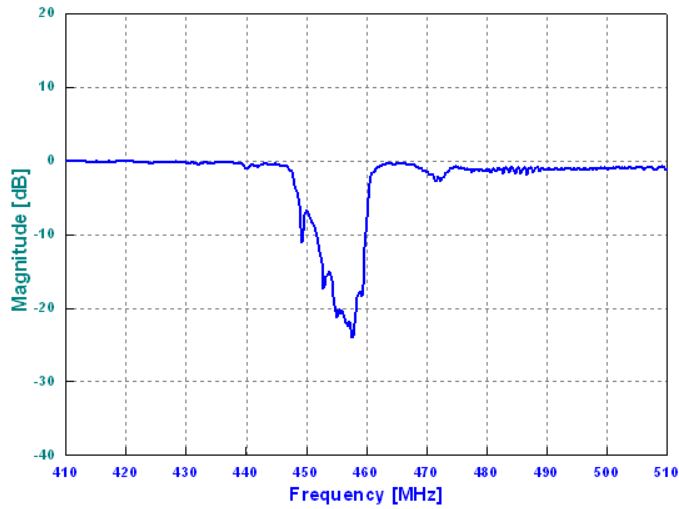


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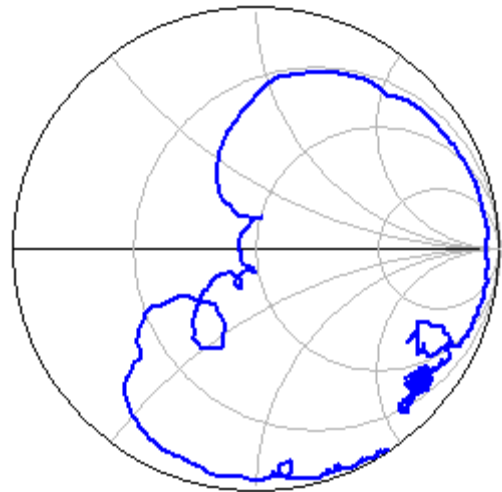
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### Tx Port

Return Loss

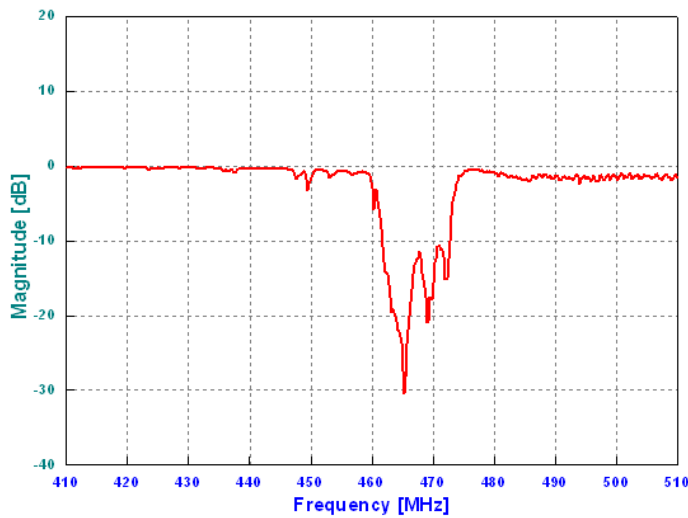


Smith Chart

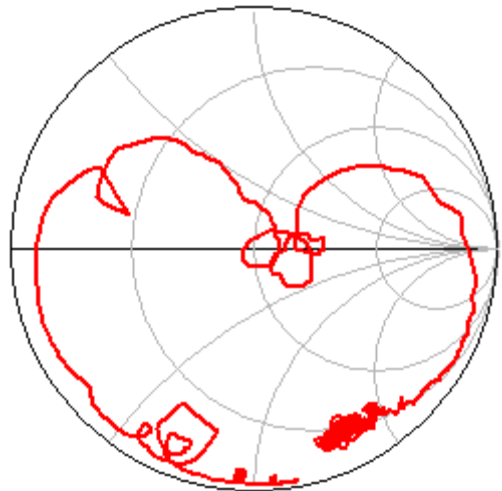


### Rx Port

Return Loss



Smith Chart



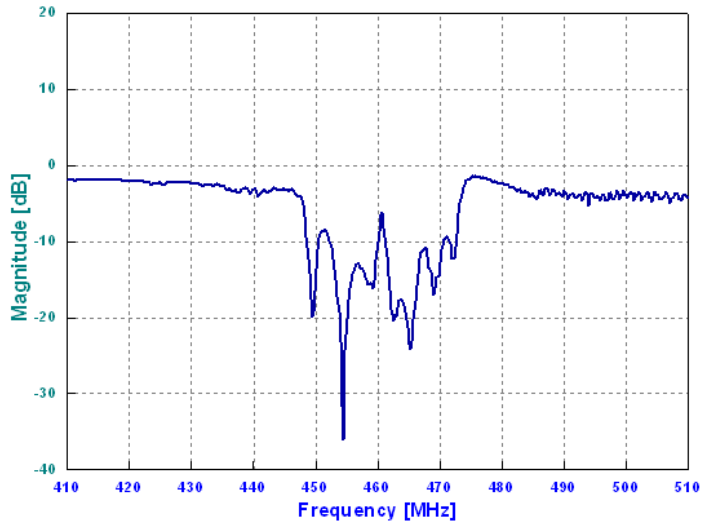


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Ant Port

Return Loss



Smith Chart

