

# SAX263

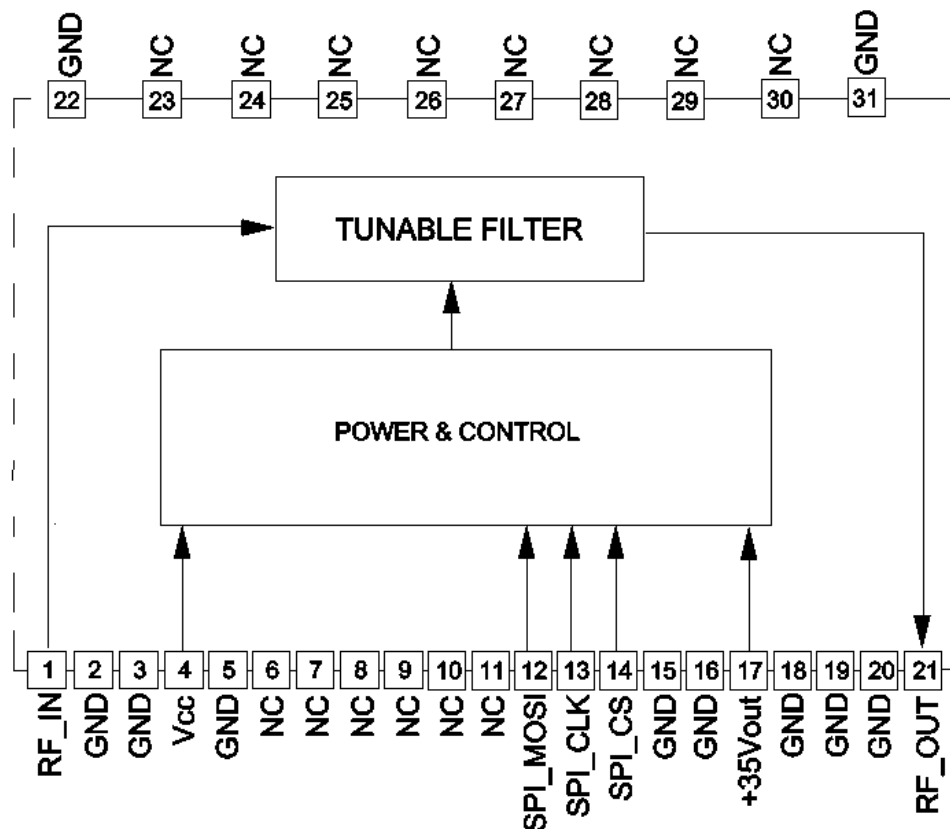
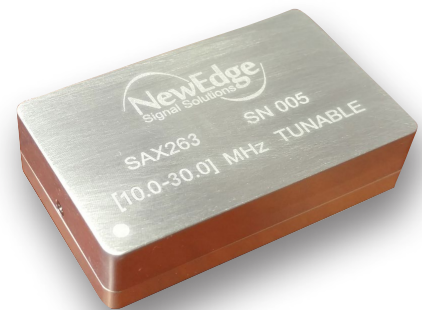
## [10 – 30] MHz Tunable Bandpass Filter

### Application

The SAX263 electronically tunable bandpass filter is designed for Tactical Communications Applications using binary weighted digital tunable capacitor arrays.

### Features

- Full Tactical Communications band resolutions
- Low insertion loss
- Fast tuning across band to 0.05 MHz resolution
- 33 dBm P1dB
- DC Power < 100 mW



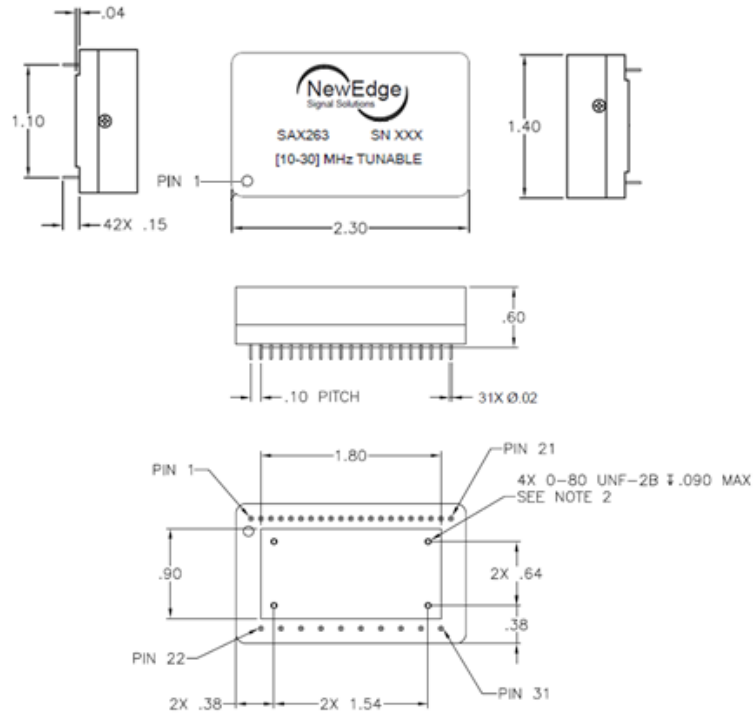
## Operating Conditions

Parameter	Specification	Min	Typ	Max	Units
Supply Voltage	-	+4.9	+5.0	+5.1	V
Supply Current	-	12	20	30	mA
Tunable Frequency Range	-	10	-	30	MHz
Input / Output Impedance	-	-	50	-	Ohms
Return Loss	[10-30] MHz	9.54	13.98	-	dB
Insertion Loss	[10-30] MHz	-	4.0	6.0	dB
3dB Bandwidth	-	-	5	-	%
Shape Factor	Overall	5.7	-	6.2	
	Low Side	6.1	-	7.0	
	High Side	5.4	-	6.8	
Noise Figure		-	-	4.5	dB
Tuning Speed	-	-	150	-	μs
Tuning Step Size	[10-30] MHz	-	0.3	-	MHz
P1dB Input Power	[10-30] MHz	-	-	33	dBm
Operating Temperature		-40	-	+85	C
Tuning Control	Serial [SPI]	-	-	-	

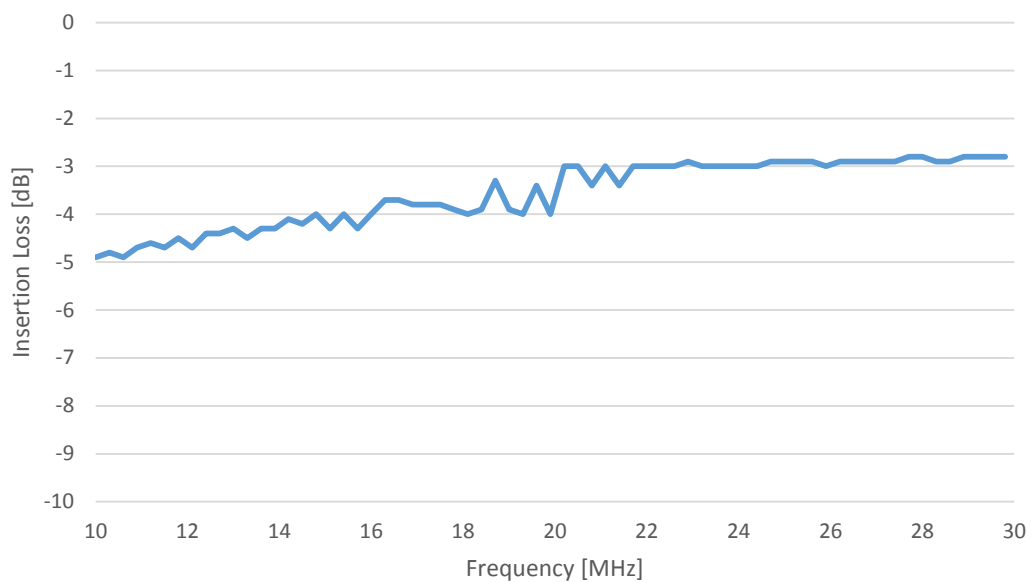
Pin No.	Label	Description, Conditions
1	RF IN	RF In
2-3,5,15-16,18-20,22,31	GND	Ground
4	VCC [+5V]	+5VDC Supply Voltage
6,10,23-30	NC	Not Connected
7-9,11	NC	Internal Use Only
12	SPI_MOSI	SPI Mode: Serial Tune Interface Master Out Slave Input
13	SPI_CLK	SPI Mode. Serial Tune Interface Clock
14	SPI_CS	SPI Mode. Serial Tune Chip Select
17	+35Vout	+35VDC Out
21	RF OUT	RF Out

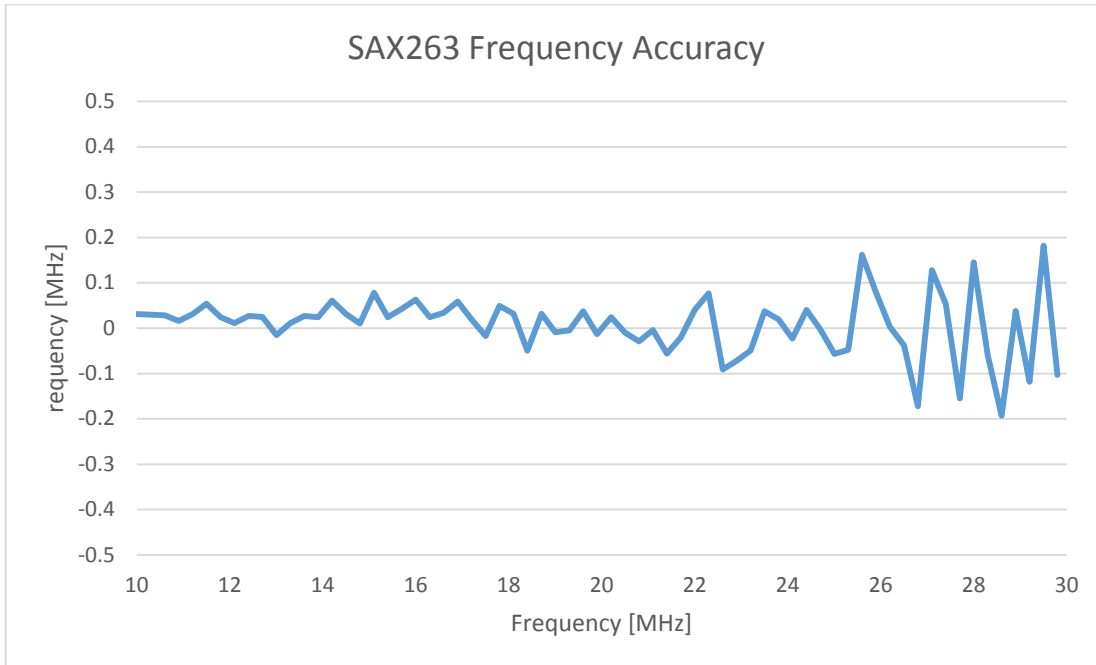
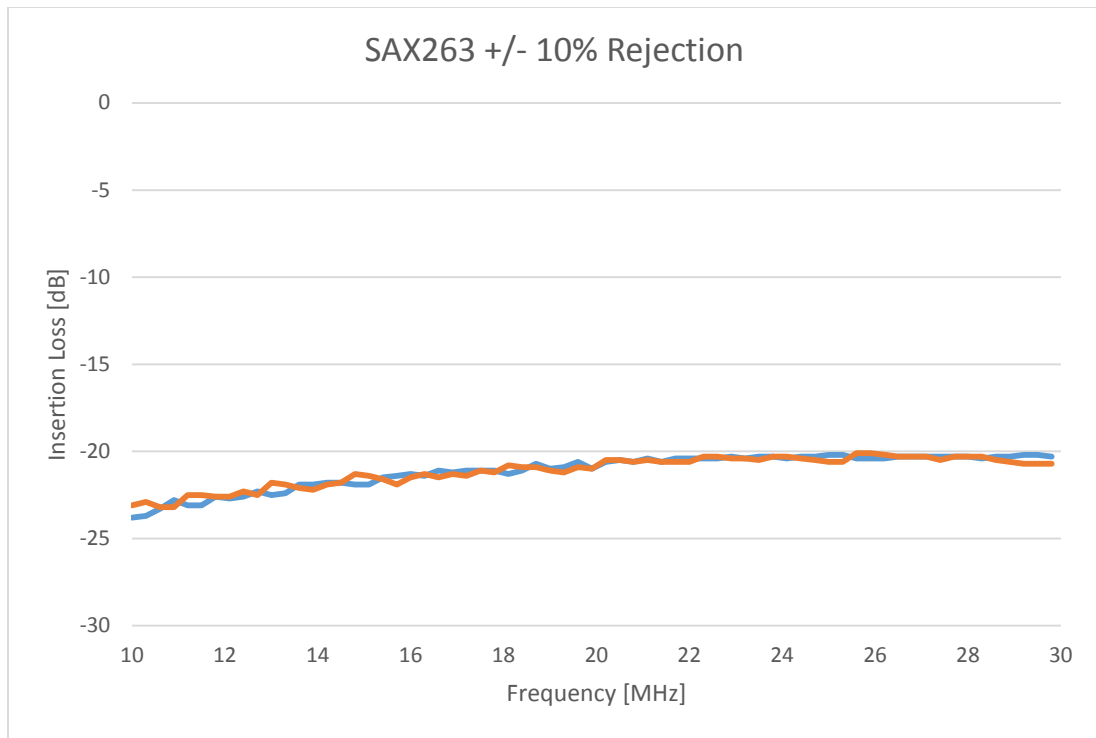
## Mechanical

Size	[2.3 x 1.4 x 0.6] inch
Interconnect Pins	1 Row 21 pins 1 Row 10 pins
Pin Diameter	20 mil
Pin Length	0.15 inch max
Pin Configuration	External jump



SAX263 Insertion Loss SN10





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