

TMX S142

SAW BANDPASS FILTER - ISM - RF

Specification (Rev. 2)

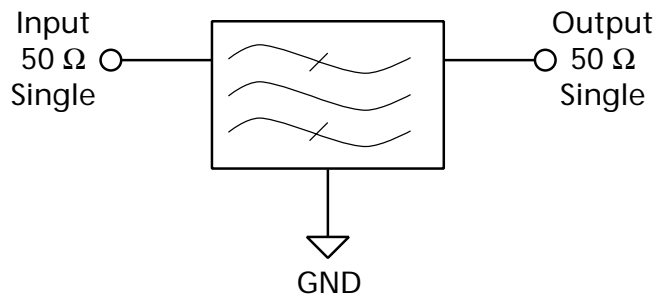
Operating temperature range: [-25°C ; +75°C]

Electrical Parameters		Unit	Minimum	Typical ⁽¹⁾	Maximum
Source impedance (single ended)		Ω	-	50 ⁽²⁾	-
Load impedance (single ended)		Ω	-	50 ⁽²⁾	-
Center frequency fo		MHz	-	869	-
Absolute attenuation					
300 kHz to 856.4 MHz		dB	40	41	-
856.4 MHz to 858.5 MHz		dB	20	40	-
880 MHz to 883 MHz		dB	30	38	-
883 MHz to 1200 MHz		dB	45	50	-
1200 MHz to 2000 MHz		dB	35	40	-
Maximum insertion loss in 868 MHz-870 MHz		dB	-	2.4	3.0
Amplitude variation in 868 MHz-870 MHz ⁽³⁾		dB	-	0.2	0.8
Input VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Output VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Input power in 868 MHz-870 MHz ⁽⁴⁾		dBm	-	-	25
Package type & size					
Length x Width		mm ²	-	3.8 x 3.8	-
Height		mm	-	1.35	1.55
Pin out					
Input	2	Output		5	
Case Ground	1, 3, 4, 6	To Be Grounded		1, 3, 4, 6	

Notes:

- (1): Typical values are nominal performances at room temperature
- (2): No external matching circuit is required
- (3): The amplitude variation is defined as the maximum level - minimum level over the given bandwidth
- (4): Minimum life time at 50° C superior to 175 000 hours.

50 Ω / 50 Ω CONFIGURATION



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Operating temperature range: [-10°C ; +60°C]

Electrical Parameters		Unit	Minimum	Typical ⁽¹⁾	Maximum
Source impedance (single ended)		Ω	-	50 ⁽²⁾	-
Load impedance (single ended)		Ω	-	50 ⁽²⁾	-
Center frequency fo		MHz	-	869	-
Absolute attenuation					
300 kHz to 856.4 MHz		dB	40	41	-
856.4 MHz to 858.5 MHz		dB	20	40	-
879 MHz to 883 MHz		dB	20	33	-
883 MHz to 1200 MHz		dB	45	50	-
1200 MHz to 2000 MHz		dB	35	40	-
Maximum insertion loss in 868 MHz-870 MHz		dB	-	2.4	3.2
Amplitude variation in 868 MHz-870 MHz ⁽³⁾		dB	-	0.2	0.8
Input VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Output VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Input power in 868 MHz-870 MHz ⁽⁴⁾		dBm	-	-	25
Package type & size					
Length x Width		mm ²	-	3.8 x 3.8	-
Height		mm	-	1.35	1.55
Pin out					
Input	2	Output		5	
Case Ground	1, 3, 4, 6	To Be Grounded		1, 3, 4, 6	

Notes:

- (1): Typical values are nominal performances at room temperature
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- (3): The amplitude variation is defined as the maximum level - minimum level over the given bandwidth
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Operating temperature range: [-40°C ; +85°C]

Electrical Parameters		Unit	Minimum	Typical ⁽¹⁾	Maximum
Source impedance (single ended)		Ω	-	50 ⁽²⁾	-
Load impedance (single ended)		Ω	-	50 ⁽²⁾	-
Center frequency fo		MHz	-	869	-
Absolute attenuation					
300 kHz to 856.4 MHz		dB	40	41	-
856.4 MHz to 858.5 MHz		dB	20	40	-
879 MHz to 883 MHz		dB	20	33	-
883 MHz to 1200 MHz		dB	45	50	-
1200 MHz to 2000 MHz		dB	35	40	-
Maximum insertion loss in 868 MHz-870 MHz		dB	-	2.4	4.5
Amplitude variation in 868 MHz-870 MHz ⁽³⁾		dB	-	0.2	0.8
Input VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Output VSWR in 868 MHz-870 MHz at 25°C		-	-	1.4:1	2.0:1
Input power in 868 MHz-870 MHz ⁽⁴⁾		dBm	-	-	25
Package type & size					
Length x Width		mm ²	-	3.8 x 3.8	-
Height		mm	-	1.35	1.55
Pin out					
Input	2	Output		5	
Case Ground	1, 3, 4, 6	To Be Grounded		1, 3, 4, 6	

Notes:

- (1): Typical values are nominal performances at room temperature
- (2): No external matching circuit is required
- (3): The amplitude variation is defined as the maximum level - minimum level over the given bandwidth
- (4): Minimum life time at 50° C superior to 175 000 hours.

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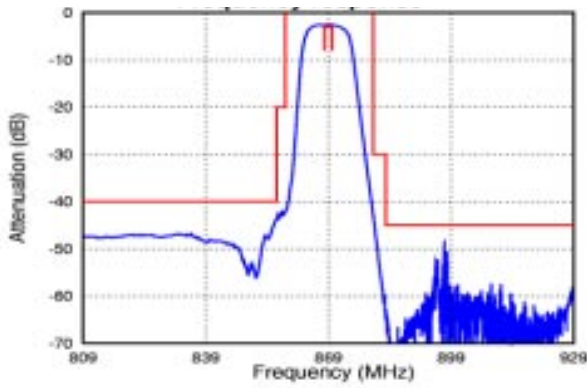
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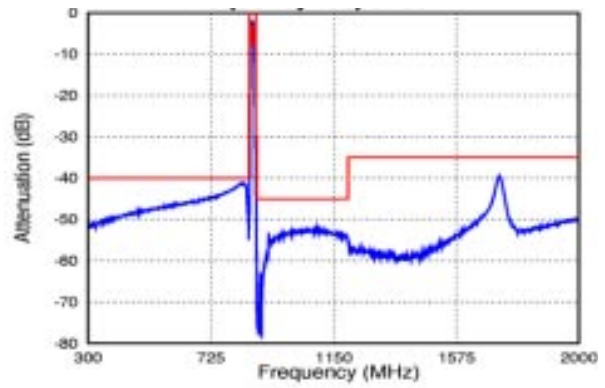
TYPICAL S21 RESPONSE

The template indicated is linked to the specification over [0 , +55°C] temperature range

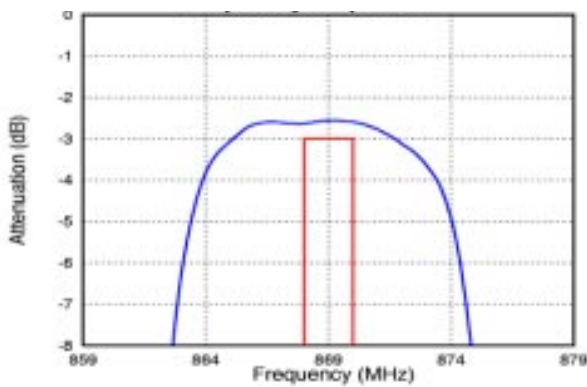
Frequency response



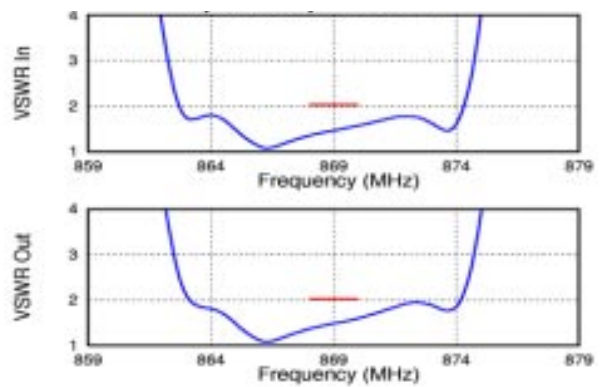
Frequency response



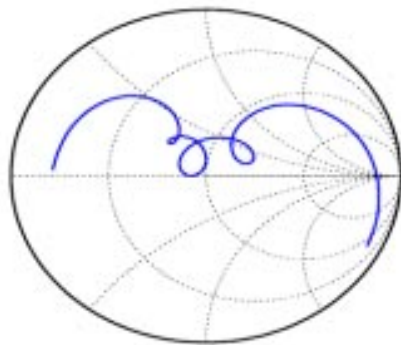
Frequency response



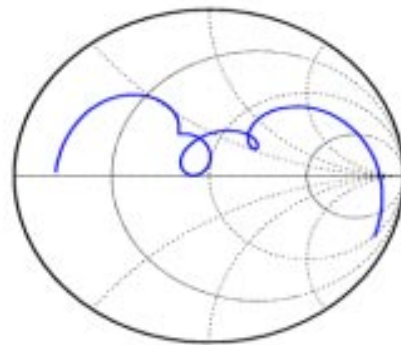
Input / Output VSWR



Input Smith Chart



Output Smith Chart





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PACKAGE DRAWING

