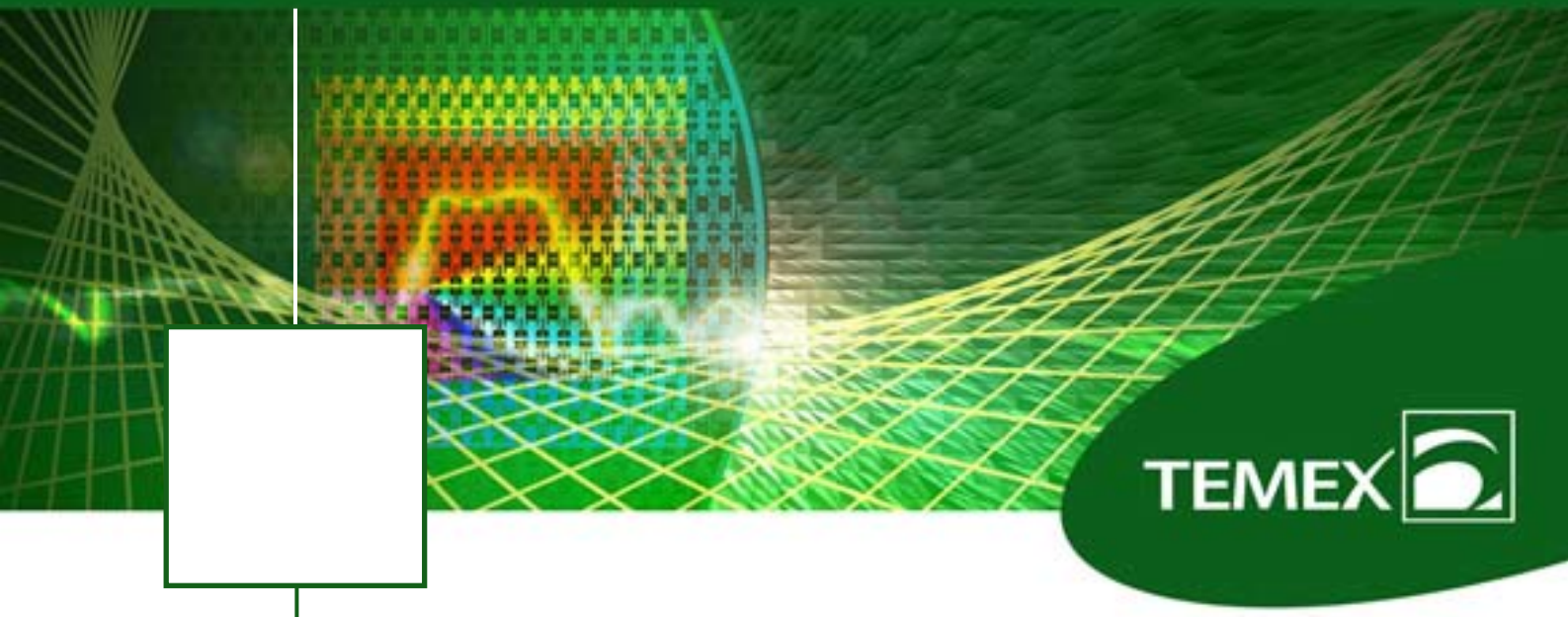
SAW Filters



TMX W410

SAW Bandpass Filter – DVB T Application

Specification (Rev-1)

TMX W410

SAW Bandpass Filter – DVB-T

Preliminary Specification (Rev 1)

April 18th, 2005

CHARACTERISTICS OF CHANNEL 1 (SWITCHING PIN 2 CONNECTED TO GROUND)

Reference Temperature: +25°c

Electrical Parameters	Unit	Minimum	Typical	Maximum
Source Impedance (single ended)	Ω	-	50	-
Load Impedance (balanced drive)	Ω / pF	-	2000 / 3	-
Center Frequency fo (center between 10dB points)	MHz	-	36.17	-
Pass bandwidth				
at 1.5dB: $BW_{1.5dB}$	MHz	7.2	7.5	7.8
at 3dB: BW_{3dB}	MHz	7.7	8.0	8.3
at 15dB: BW_{15dB}	MHz	8.6	8.9	9.2
at 30dB: BW_{30dB}	MHz	8.8	9.4	10.0
Relative Attenuation				
From 25.00 MHz to 31.15 MHz	dB	28.0	34.0	-
From 41.15 MHz to 42.00 MHz	dB	27.0	33.0	-
From 42.00 MHz to 45.00 MHz	dB	24.0	30.0	-
Insertion attenuation IL Reference level for the following data 36.17MHz	dB	19.5	21.0	22.5
Group delay ripple (p-p) Δτ From 32.35 MHz to 40.05 MHz	ns	-	50	-
Reflected Wave Signal Suppression 1.1µs…..6.0µs after main pulse (test pulse 250ns, carrier frequency 36.17 MHz)	dB	42.0	50.0	-
Temperature coefficient of frequency TC_f	ppm/K	-	-72	-
Package type			SIP5D	

TMX W410

SAW Bandpass Filter – DVB-T

Preliminary Specification (Rev 1)

April 18th, 2005

CHARACTERISTICS OF CHANNEL 2 (SWITCHING PIN 2 CONNECTED TO PIN 1)

Reference Temperature: +25°c

Electrical Parameters	Unit	Minimum	Typical	Maximum
Source Impedance (single ended)	Ω	-	50	-
Load Impedance (balanced drive)	Ω / pF	-	2000 / 3	-
Center Frequency fo (center between 10dB points)	MHz	-	36.17	-
Pass bandwidth				
at 1.5dB: $BW_{1.5dB}$	MHz	6.4	6.7	7.0
at 3dB: BW_{3dB}	MHz	6.7	7.0	7.3
at 15dB: BW_{15dB}	MHz	7.7	8.0	8.3
at 30dB: BW_{30dB}	MHz	7.9	8.5	9.1
Relative Attenuation				
From 25.00 MHz to 31.55 MHz	dB	28.0	34.0	-
From 40.75 MHz to 45.00 MHz	dB	27.0	32.0	-
Insertion attenuation IL Reference level for the following data 36.17 MHz	dB	19.5	21.0	22.5
Group delay ripple (p-p) Δτ From 32.75 MHz to 39.55 MHz	ns	-	50	-
Reflected Wave Signal Suppression 1.1µs…..6.0µs after main pulse (test pulse 250ns, carrier frequency 36.17 MHz)	dB	42.0	50.0	-
Temperature coefficient of frequency TC_f	ppm/K	-	-72	-
Package type			SIP5D	

Maximum Ratings

Rating		Unit	Value
Operable Temperature Range	T_A	-25 to +65	°C
Storage Temperature Range	T_{stg}	-40 to +85	°C
DC Voltage (between any terminals)	V_{DC}	5	V
AC Voltage (between any terminals)	V_{PP}	10	V

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SAW Bandpass Filter – DVB-T

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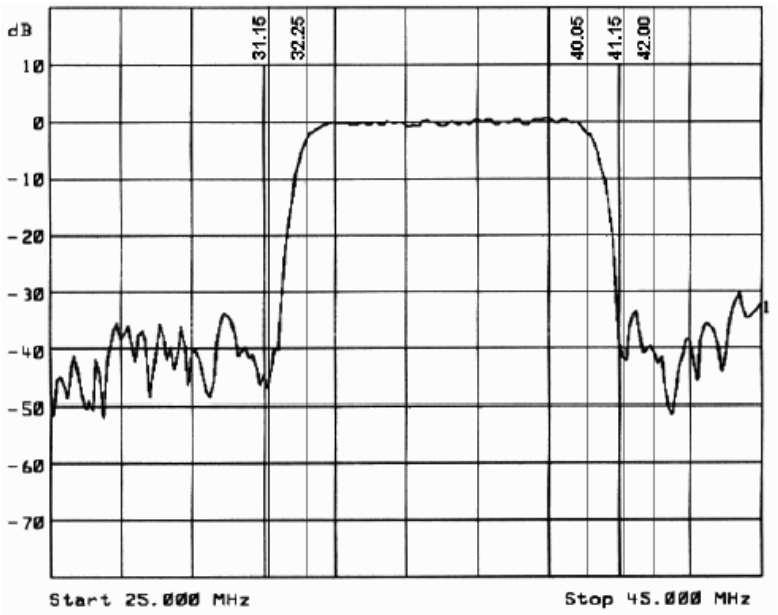
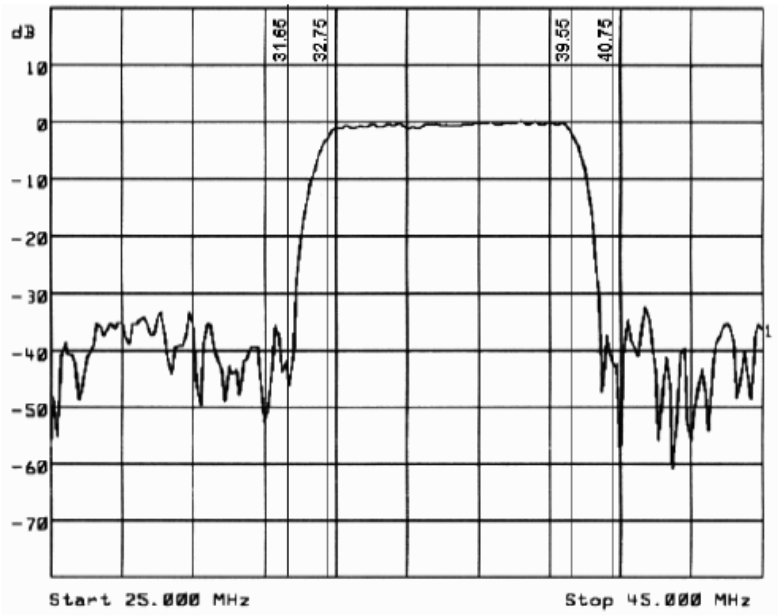
TYPICAL S21 RESPONSE

FREQUENCY RESPONSE OF CHANNEL 1



FREQUENCY RESPONSE OF CHANNEL 2



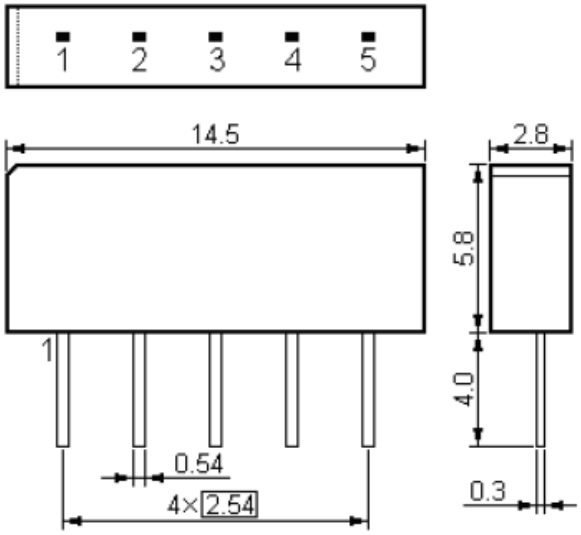
TMX W410

SAW Bandpass Filter – DVB-T

Preliminary Specification (Rev 1)

April 18th, 2005

PACKAGE DRAWING



1	Input
2	Switching Input
3	Chip carrier - ground
4	Output
5	Output

Plastic Package **SIP5D**

Unit: mm