

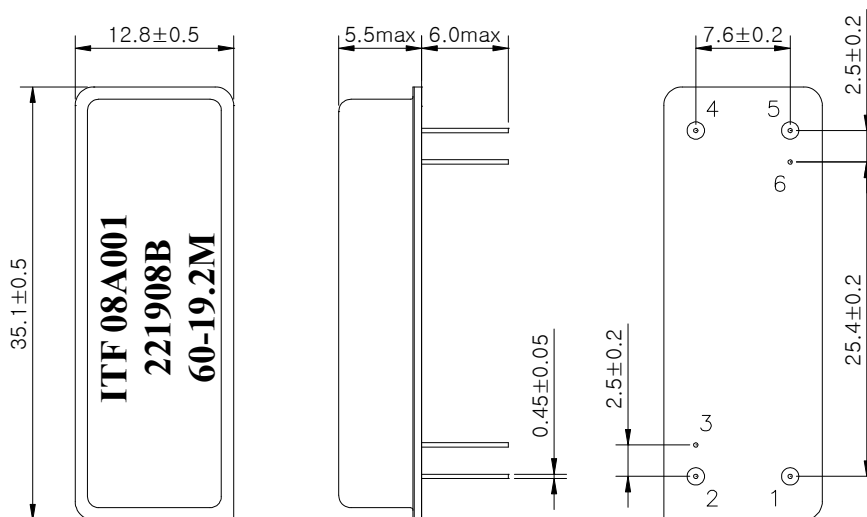
# SAW Bandpass Filter 221908B



## 1. Features

- IF Bandpass Filter
- High Attenuation
- Single-Ended Operation
- DIP Package
- Maximum Storage Temperature Range : -40°C ~ 85°C
- Electrostatics Sensitive Device (ESD)

## 2. Package Dimension



### Package : D3512


Dimensions shown are nominal in millimeters

Base : Fe(SPCC), Au plating over Ni plated

Cap : Cu & Cr Alloy, Ni Plated

Termination : Kovar, Au Plated

Pin Configuration	
1	Input
5	Output
2, 4	Ground
3, 6	Case ground

	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	221908B	
		Rev. Date	2008-8-28	
		Rev.	NM8020-CS01	1/5

# SAW Bandpass Filter 221908B



## 3. Specifications

Fo = 60.0 MHz


Terminating source impedance : 50Ω and matching network

Terminating load impedance : 50Ω and matching network

		Minimum	Typical	Maximum
Center Frequency	MHz	-	60.0	-
Insertion Loss	dB	-	25.5	27.0
1dB Bandwidth	MHz	19.1	19.25	-
3dB Bandwidth	MHz	-	19.53	-
40dB Bandwidth	MHz	-	20.74	-
50dB Bandwidth	MHz	-	20.85	20.95
Amplitude Ripple (fo±9.375 MHz)	dB	-	0.55	1.0
Group Delay Variation (fo±9.375 MHz)	nsec	-	45	60
Absolute Delay	usec	-	2.46	-
Ultimate Rejection	dB	50	55	-
Temperature Coefficient of Frequency	ppm/°C	-	-72	-

### Notes :

- 1) All specifications are based on the matching schematic shown below
- 2) All specifications are measured by Agilent Network analyzer and full 2 port calibration at room temperature
- 3) All attenuation measurements are measured relative to insertion loss

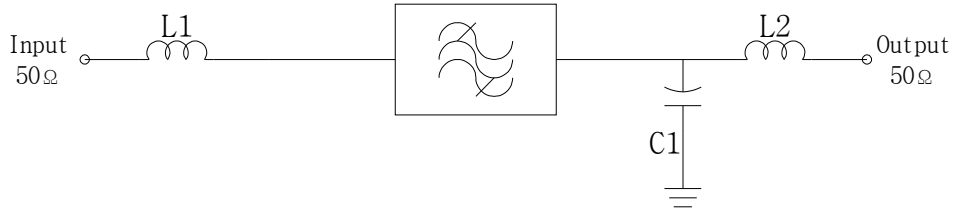
 Integrated Technology Future	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	221908B	
		Rev. Date	2008-8-28	
		Rev.	NM8020-CS01	2/5

# SAW Bandpass Filter 221908B



## 4. Matching Schematic

( Actual matching values may vary due to PCB layout and parasitics )



**L1 = 180nH, L2 = 180nH**

**C1 = 12pF**


## 5. Marking Configuration

ITF<sup>1)</sup> 08A001<sup>2)</sup>

221908B<sup>3)</sup>

60<sup>4)</sup> -19.2M<sup>5)</sup>

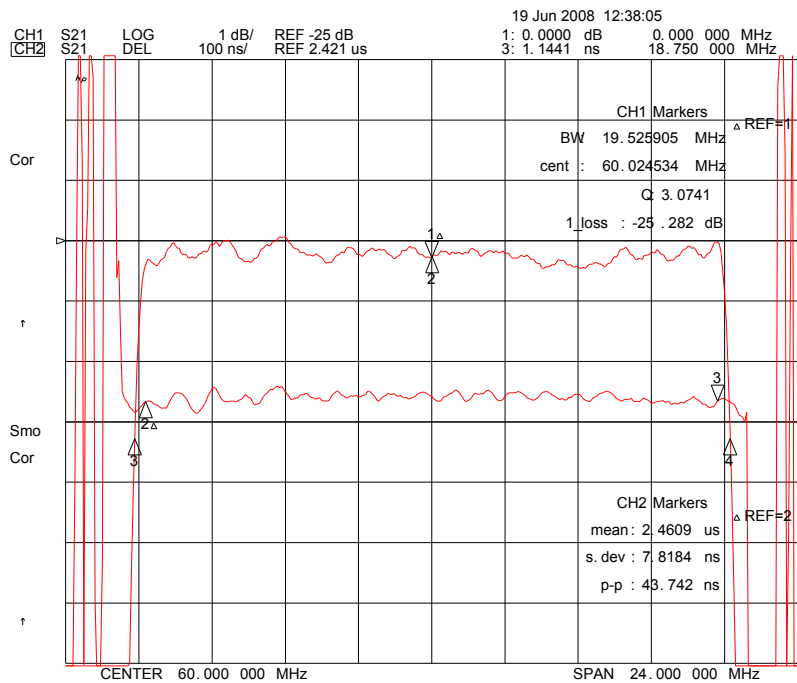
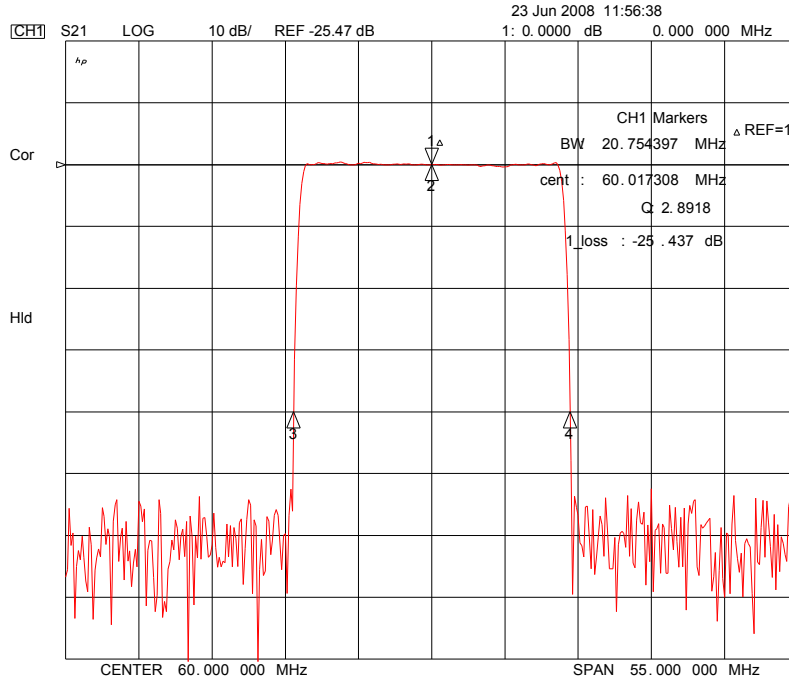
- 1) Manufacturer name
- 2) Lot Number
- 3) Part Number
- 4) Center Frequency
- 5) 1dB-Bandwidth

 Integrated Technology Future	<b>ITF Co., Ltd.</b> 102-901, Bucheon Technopark 364, Samjeong-Dong, Ojeong-Gu, Bucheon-City, Gyeonggi-Do, Korea 421-809	Part No.	221908B	
		Rev. Date	2008-8-28	
		Rev.	NM8020-CS01	3/5

# SAW Bandpass Filter 221908B



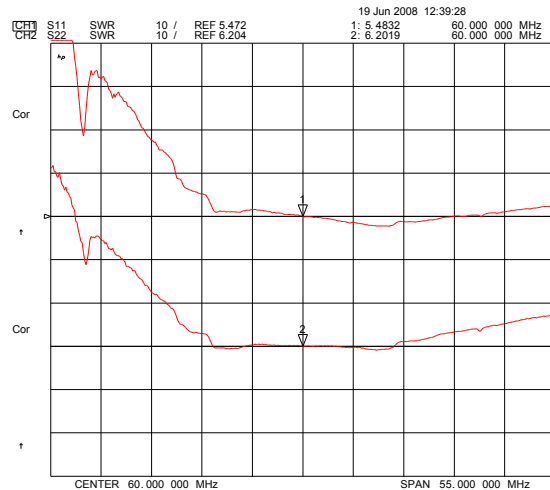
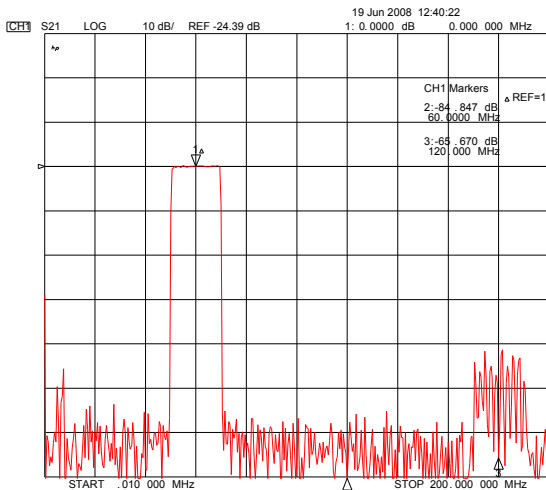
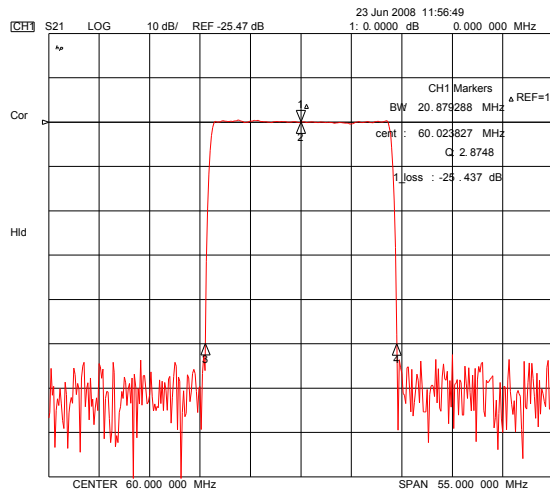
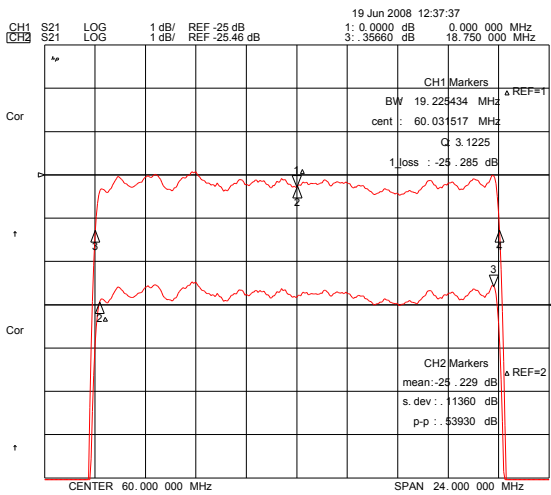
## 6. Typical Performance ( at +25°C )



**ITF Co., Ltd.**  
 102-901, Bucheon Technopark 364,  
 Samjeong-Dong, Ojeong-Gu, Bucheon-City,  
 Gyeonggi-Do, Korea 421-809

Part No.	221908B	
Rev. Date	2008-8-28	
Rev.	NM8020-CS01	4/5

# SAW Bandpass Filter 221908B



**ITF Co., Ltd.**  
 102-901, Bucheon Technopark 364,  
 Samjeong-Dong, Ojeong-Gu, Bucheon-City,  
 Gyeonggi-Do, Korea 421-809

Part No.	221908B	
Rev. Date	2008-8-28	
Rev.	NM8020-CS01	5/5