

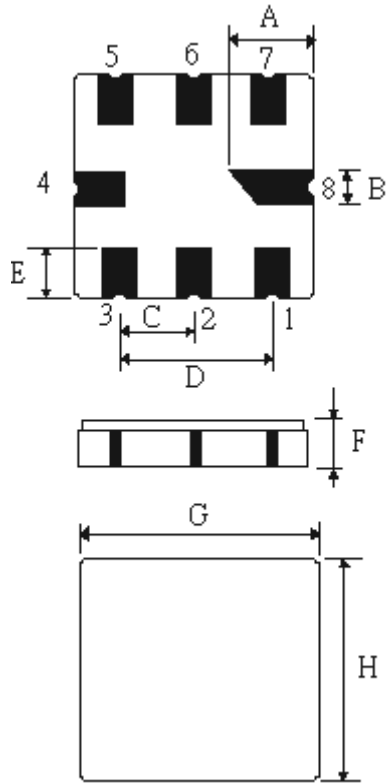
Spec no:SM5050F-03150-R60-NJ-A

## 1. Features

Low - loss, compact , and economical SAW filter de- signed to provide front-end selectivity in 315.00 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 KHz IF, direct conversion and superregen.

2. Type : SM5050 (Lead Free Parts)

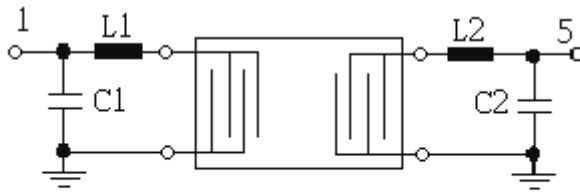
## 3. Product Dimension



Pin	Connection
1	Input
2	Input-ground
5	Output
6	Output-ground
3,7	To be Ground
4,8	Case Ground

Sign	Data (unit:mm)	Sign	Data(unit:mm)
A	2.08±0.15	E	1.2±0.15
B	0.60±0.1	F	1.35±0.15
C	1.27±0.1	G	5.0±0.2
D	2.54±0.1	H	5.0±0.2

## 4. Test Circuit



$C1=13\text{pF}^*$  ,  $L1=80\text{nH}^*$  ,  $L2=80\text{nH}^*$  ,  $C2=13\text{pF}^*$

## 5. Performance

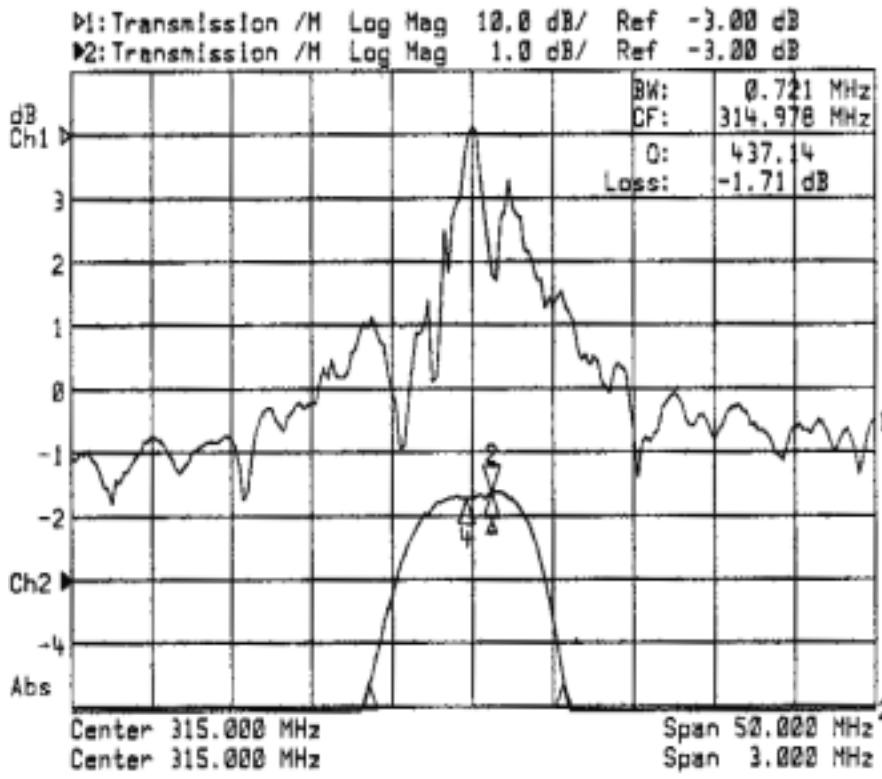
### 5-1. Maximum Ratings

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12V	VDC
Storage Temperature	-40 to +85	
Soldering Temperature	+235	

### 5-2. Electronic Characteristics

Item		Min.	Typ.	Max.	Units
Center Frequency $f_c$ (center frequency between 3dB points)			315.00		MHz
Insertion Loss $I_L$		--	3.0	5.5	dB
3dB Pass band $BW_3$			600		kHz
Rejection	at $f_c -21.4\text{MHz}$ (Image)	40	50	--	dB
	at $f_c -10.7\text{MHz}$ (LO)	15	30	--	
	Ultimate	--	80	--	
Temperature	Operating Case Temperature $T_c$	-35		+85	
	Turnover Temperature $T_o$	24	39	54	
	Turnover Frequency $f_o$		$f_c$		MHz
	Frequency Temperature Coefficient $FTC$		0.032		ppm/ <sup>2</sup>
Frequency Aging	Absolute Value during the First Year		10		ppm/yr

## 6. Frequency Response



## 7 Notice

Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with  $VSWR \leq 1.2:1$ . The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency,  $f_c$ . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.