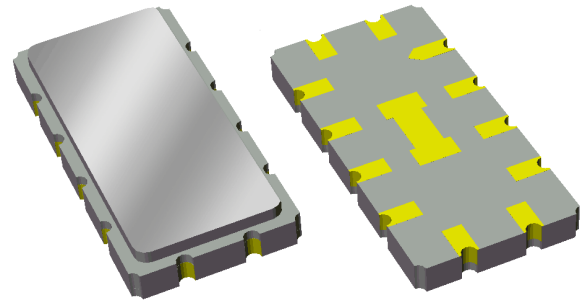


854565

350 MHz SAW Filter

Applications

- General Purpose
- For IF applications



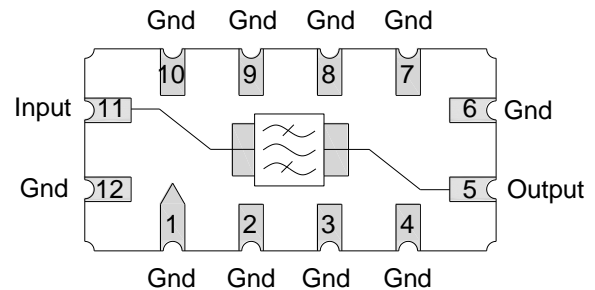
Product Features

- Typical 1 dB Bandwidth of 1.2 MHz
- Low loss
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small Size
- Dimensions: 13.30 x 6.50 x 1.75mm
- Hermetically Sealed
- RoHS compliant, Pb-free



Functional Block Diagram

Top view



General Description

The 854565 is a high-performance IF SAW filter with a center frequency of 350 MHz and an 1 dB bandwidth of 1.2 MHz.

It features low loss with excellent attenuation, and is designed to be used with a single ended input and output.

The device is RoHS compliant and Pb-free.

Pin Configuration Single-ended

Pin #	Description
11	Input
5	Output
6,12	Ground
1,2,3,4,7,8,9,10	Case ground

Ordering Information

Part No.	Description
854565	packaged part
854565-EVB	evaluation board

Standard T/R size = 2000 units/reel.

Specifications

Electrical Specifications ⁽¹⁾

Specified Temperature Range: +25 °C

Parameter	Conditions	Min	Typical ⁽²⁾	Max	Units
Center Frequency		349.85	350	350.15	MHz
Insertion Loss	At 350 MHz	-	10.2	12	dB
1 dB Bandwidth ⁽³⁾		1.0	1.2	-	MHz
40 dB Bandwidth ⁽³⁾		-	3.3	4.5	MHz
Group Delay Variation	349.5 – 350.5 MHz	-	80	270	ns p-p
Phase Ripple	349.5 – 350.5 MHz	-	2.6	6.0	deg p-p
Triple Transit suppression		40	43	-	dB
Source Impedance (single-ended) ⁽⁴⁾		-	50	-	Ω
Load Impedance (single-ended) ⁽⁴⁾		-	50	-	Ω

Notes:

- All specifications are based on the TriQuint schematic for the main reference design shown on page 3
- Typical values are based on average measurements at room temperature
- Relative to minimum insertion loss
- This is the optimum impedance in order to achieve the performance shown

Absolute Maximum Ratings

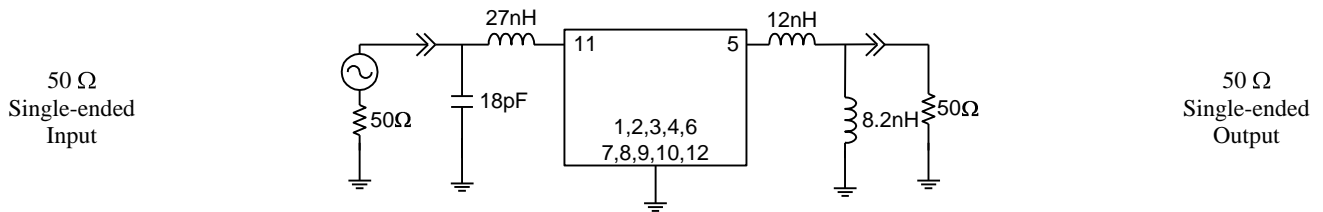
Parameter	Rating
Operating Temperature ⁽⁵⁾	-40 to +85 °C
Storage Temperature	-40 to +85 °C

- Device may operate over this range with degraded Electrical Specifications

Operation of this device outside the parameter ranges given above may cause permanent damage.

Reference Design – 50Ω SE Input, 50Ω SE Output

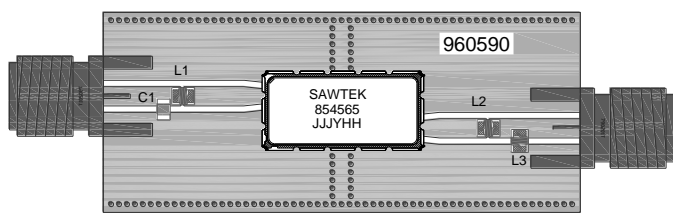
Schematic



Notes:

1. Actual matching values may vary due to PCB layout and parasitics

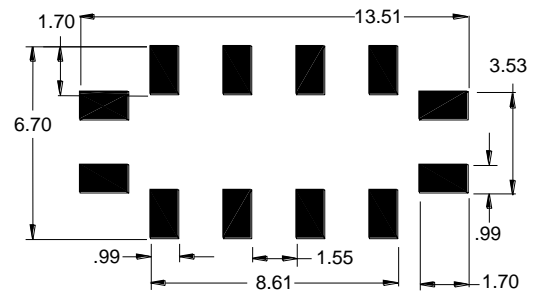
PC Board



Notes:

- Top, middle & bottom layers: 1 oz copper
- Substrates: FR4 dielectric, .031" thick
- Finish plating: Nickel: 3-8μm thick, Gold: .03-.2μm thick
- Hole plating: Copper min .0008μm thick

Mounting Configuration



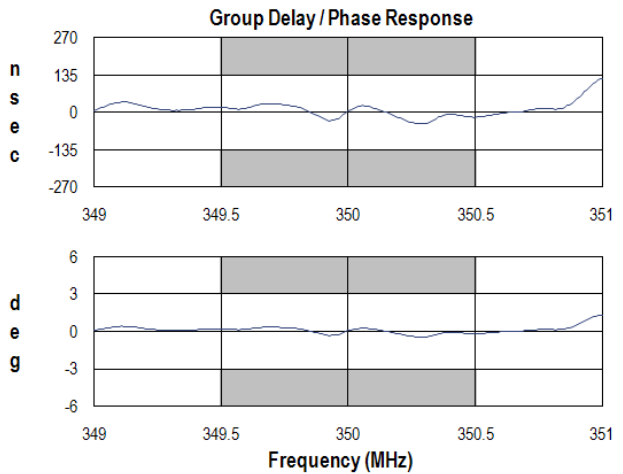
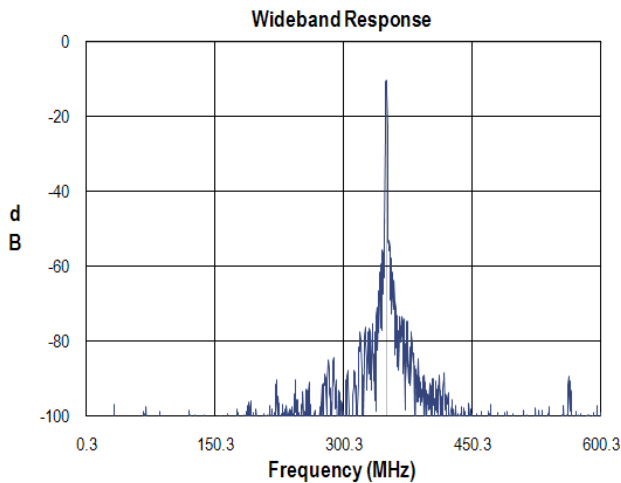
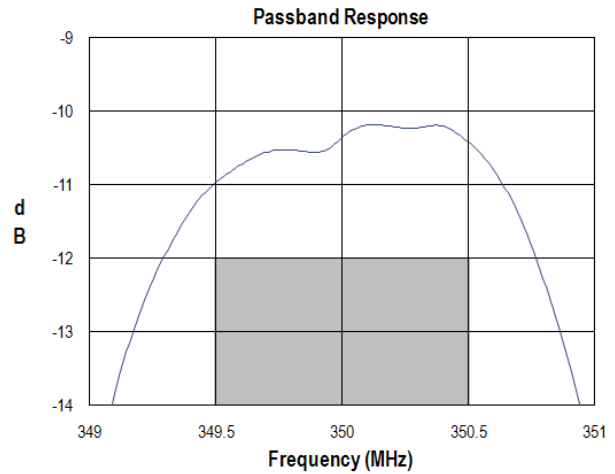
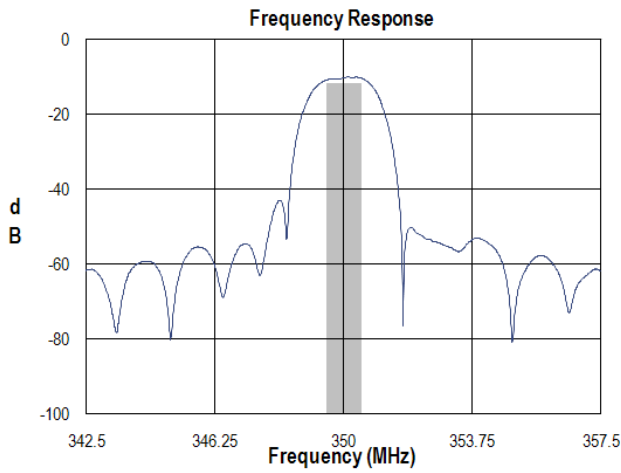
Notes:

1. All dimensions are in millimeters.
2. This footprint represents a recommendation only.

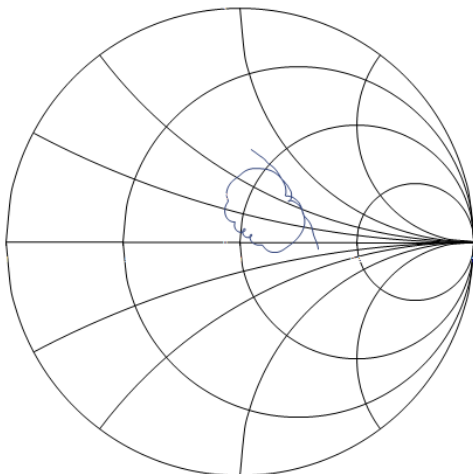
Bill of Material

Reference Desg.	Value	Description	Manufacturer	Part Number
L1	27 nH	Coil Wire-wound,0805, 5%	Coilcraft	0805CS-270XJLC
L2	12 nH	Coil Wire-wound, 0805, 5%	Coilcraft	0805CS-120XJLC
L3	8.2 nH	Coil Wire-wound, 0805, 5%	Coilcraft	0805CS-082XJLC
C1	18.0 pF	Chip Capacitor,0805, 5%	MuRata	GRM2165C1H180JZ01
SMA	N/A	SMA connector	Radiall USA Inc.	9602-1111-018
PCB	N/A	3-layer	multiple	960590

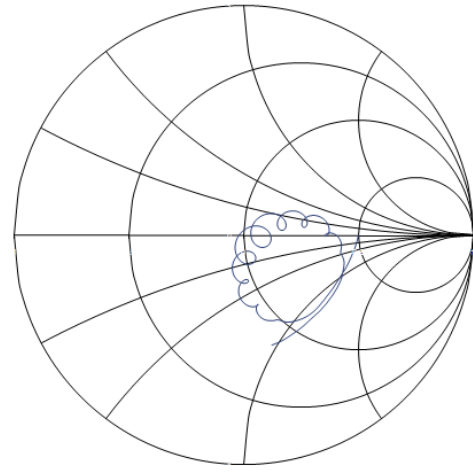
Typical Performance (at room temperature)



Input Smith Chart

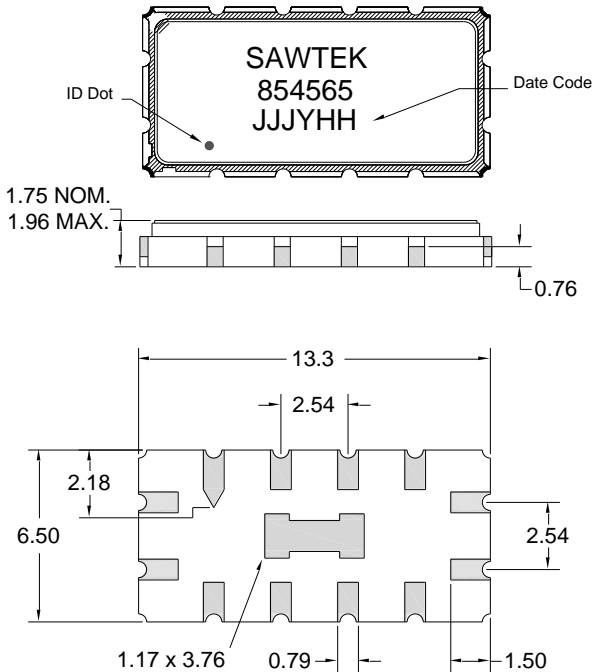


Output Smith Chart



Mechanical Information

Package Information, Dimensions and Marking



Package Style: SMP-53
 Dimensions: 13.30 x 6.50 x 1.75mm

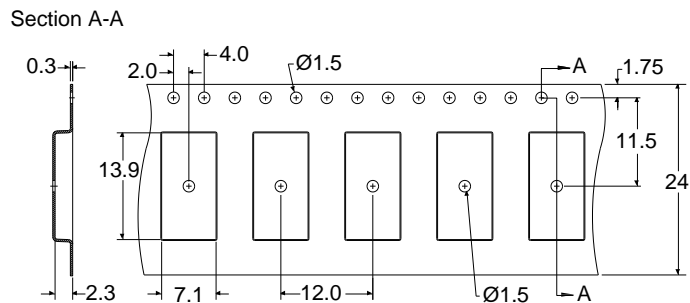
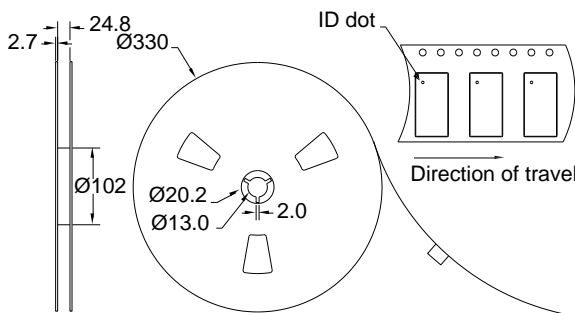
Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0 μ m, over a 2-6 μ m Ni plating

All dimensions shown are nominal in millimeters
 All tolerances are ± 0.15 mm except overall length and width ± 0.10 mm

The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

Tape and Reel Information

Standard T/R size = 2000 units/reel. All dimensions are in millimeters



Product Compliance Information

ESD Information



Caution! ESD-Sensitive Device

ESD Rating: 1C

Value: Passes ≥ 1500 V min.
Test: Human Body Model (HBM)
Standard: JEDEC Standard JESD22-A114

ESD Rating: C

Value: Passes ≥ 500 V min.
Test: Machine Model (MM)
Standard: JEDEC Standard JESD22-A115

MSL Rating

Devices are Hermetic, therefore MSL is not applicable.

Solderability

Compatible with the latest version of J-STD-020, lead free solder, 260°C

Refer to [Soldering Profile](#) for recommended guidelines.

This part is compliant with EU 2002/95/EC RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment).

This product also has the following attributes:

- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C₁₅H₁₂Br₄O₂) Free
- PFOS Free
- SVHC Free

Contact Information

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