885025

1880 MHz BAW Filter

Applications

- General purpose RF filter
- Wireless infrastructure
- 4G, Multi-standard
- Band 2 Uplink
- Repeaters

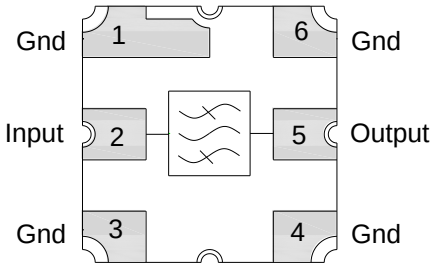


SMP-12, 3.00 x 3.00 x 1.22 mm

Product Features

- Usable bandwidth 60 MHz
- High attenuation
- Excellent power handling
- Low Loss
- Single-ended operation
- No matching required for operation at 50Ω
- Small Size: 3.00 x 3.00 x 1.22 mm
- Ceramic Surface Mount Package (SMP)
- Hermetically sealed
- RoHS compliant, Pb-free

Functional Block Diagram



General Description

885025 is a general purpose Uplink filter for Band 2. This filter was specifically designed in a 3x3mm hermetic package for Base Station and Repeater applications and is part of our wide portfolio of RF filters in the same package.

Low insertion loss, coupled with high attenuation and excellent power handling, makes this filter a natural choice for our customers Uplink RF filtering needs and other general purpose applications.

Pin Configuration - Single Ended

Pin No.	Label
2	Input
5	Output
1,3,4,6	Ground

Ordering Information

Part No.	Description
885025	Product description
885025-EVB	Evaluation board description

Standard T/R size = 5000 units/reel

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Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	−40 to +85 °C
Operable Temperature (1)	−40 to +85 °C
RF Input Power CW, +55 °C for 10K hours	+30 dBm

Notes:
1. Operation of this device outside the parameter ranges given may cause permanent damage.

Electrical Specifications (1)

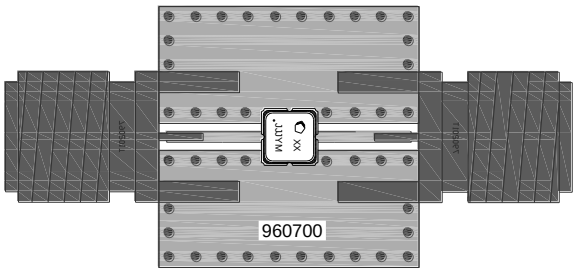
Test conditions unless otherwise noted: (2) Temp = −40 °C to +85 °C

Parameter (3)	Conditions	Min	Typ (4)	Max	Units
Center Frequency		-	1880.0	-	MHz
Maximum Insertion Loss	1850 –1910 MHz	-	3.5	5.5	dB
Amplitude Variation (5)	1850 –1910 MHz 1850 –1910 MHz, over any 3.84 MHz span	-	1.9 1.5	4.5 2.8	dB p-p
Absolute Attenuation (6)	869 – 894 MHz 1574.42 –1576.42 MHz 1920 –1930 MHz 1930 –1990 MHz 3690 –3830 MHz 5540 –5740 MHz 7390 –7650 MHz	37 45 20 40 20 12 -	41 50 33 45 25 18 8	- - - - - - -	dB
Input VSWR	1850 –1910 MHz	-	1.7	2.4:1	-
Output VSWR	1850 –1910 MHz	-	1.7	2.4:1	-
Source Impedance (7)	single-ended	-	50	-	Ω
Load Impedance (7)	single-ended	-	50	-	Ω

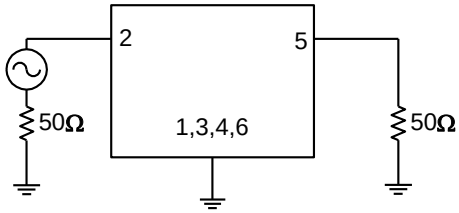
Notes:
1. All specifications are based on the TriQuint schematic shown on page 3
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Typical values are based on average measurements at room temperature
5. Amplitude Variation is defined as the difference between the lowest loss and the highest loss within defined frequency points
6. Relative to zero dB
7. This is the optimum impedance in order to achieve the performance shown

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Evaluation Board



Matching Schematics



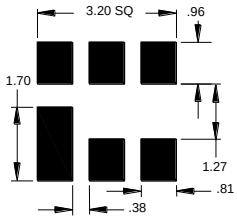
Notes:

1. No impedance matching required
2. PCB: . 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

Bill of Material – 885025-EVB

Reference Des.	Value	Description	Manuf.	Part Number
U1	N/A	1880 MHz Baw Filter	TriQuint	885025
SMA	N/A	SMA connector	Radiall USA	9602-1111-018
PCB	N/A	3 layer	Multiple	960700

PCB Mounting Pattern



Notes:

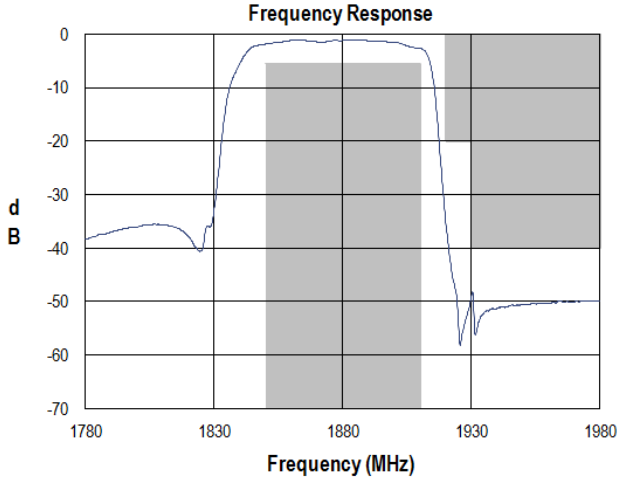
1. All dimensions are in millimeters. Angles are in degrees.
2. This drawing specifies the mounting pattern used on the TriQuint evaluation board for this product. Some modification may be necessary to suit end user assembly materials and processes.

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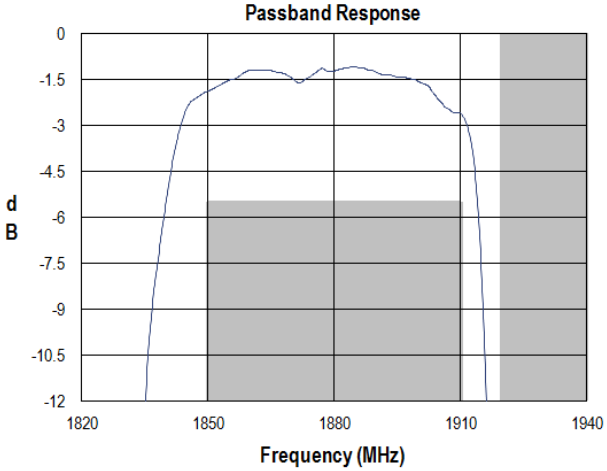
Performance Plots

Test conditions unless otherwise noted: Temp= +25°C

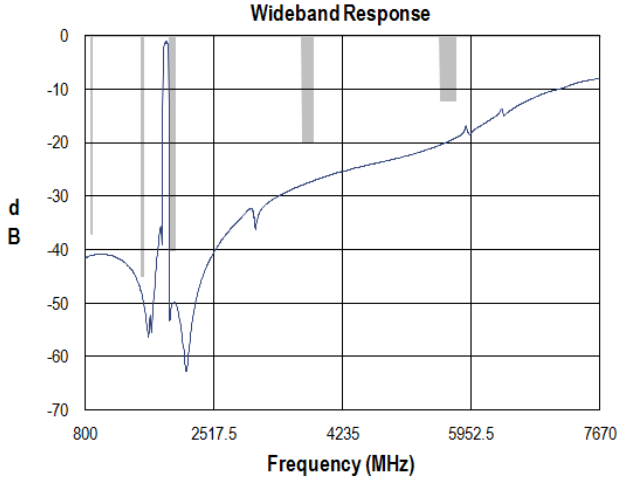
Frequency Response



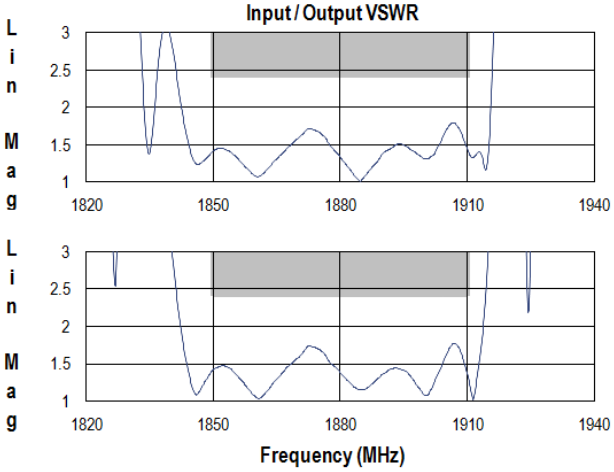
Passband Response



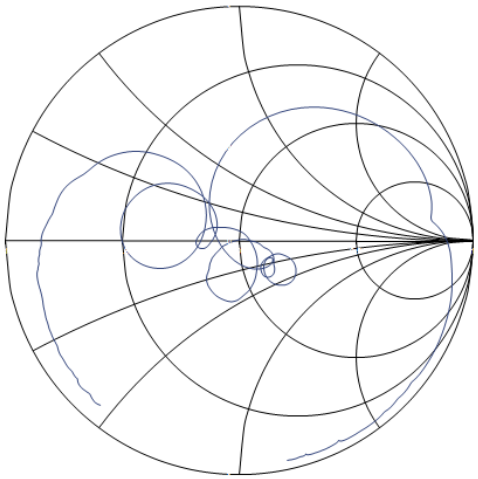
Wideband Response



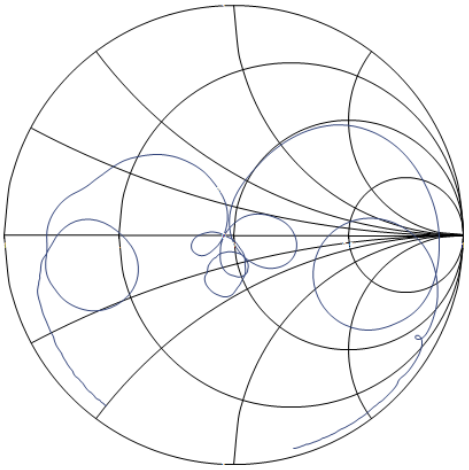
Input / Output VSWR



Input Smith Chart

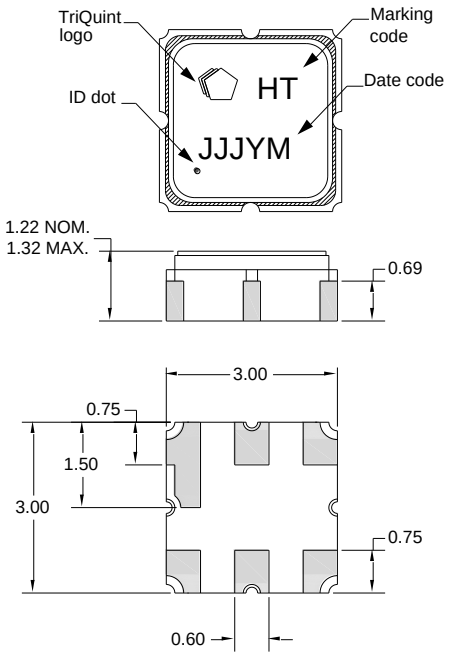


Output Smith Chart



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Package Information, Marking and Dimensions



Package Style: SMP-12A
Dimensions: 3.00 x 3.00 x 1.22 mm

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

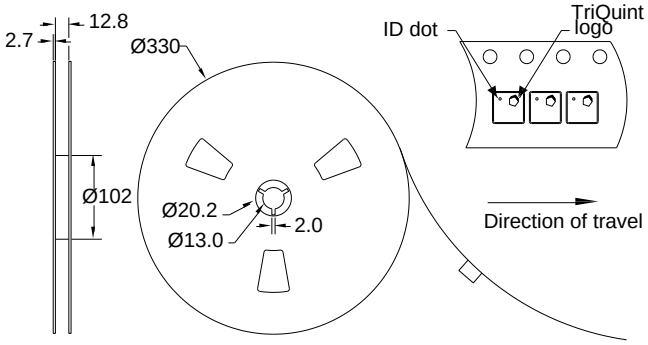
All dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

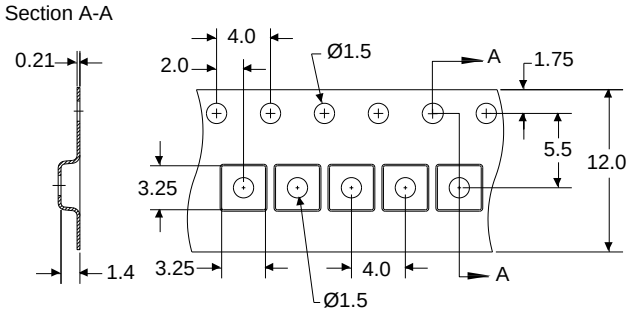
The date code consists of day of the current year (Julian, 3 digits), Y = last digit of the year, and M = manufacturing site code

Notes:
1. All dimensions shown are typical in millimeters
2. An asterisk (*) in front of the marking code indicates prototype.

Tape and Reel information

Standard T/R size = 5000 units/reel. All dimensions are in millimeters





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Product Compliance Information

ESD Sensitivity Ratings



Caution! ESD-Sensitive Device

ESD Rating: Class 3B
Value: Passes ≥ 8000 V
Test: Electrostatic Discharge Sensitivity Testing, Human Body Model (HBM) - component level
Standard: ESDA/JEDEC JS-001-2012

ESD Rating: Class C
Value: Passes ≥ 800 V
Test: Machine Model (MM)
Standard: JEDEC Standard JESD22-A115

MSL Rating

Not applicable. Hermetic package.

Solderability

Compatible with both lead-free (260°C maximum reflow temperature) and tin/lead (245°C maximum reflow temperature) soldering processes.

Refer to **Soldering Profile** for recommended guidelines.

RoHs Compliance

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:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A ($C_{15}H_{12}Br_4O_2$) Free
- PFOS Free
- SVHC Free

Contact Information

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