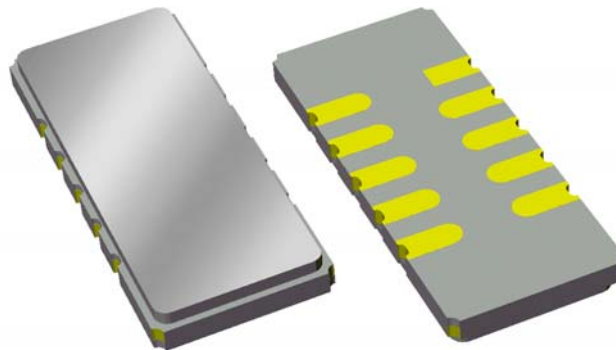


Preliminary Data Sheet

Part Number 855756
170.6 MHz SAW Filter

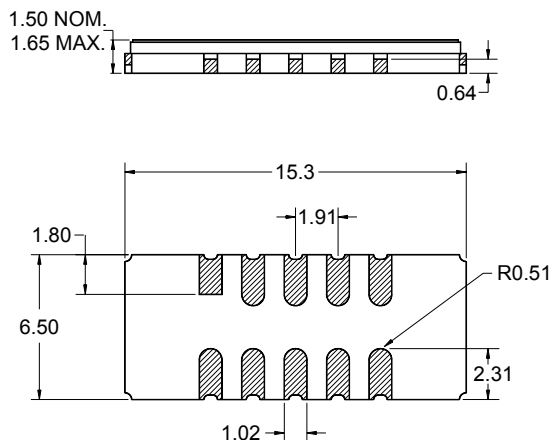
Features

- For GSM Basestation applications
- Usable bandwidth 0.3 MHz
- Low loss
- Single-ended operation
- Ceramic Surface Mount Package (SMP)



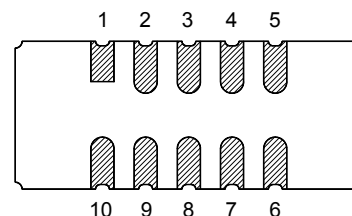
Package

Surface Mount 15.3 x 6.50 x 1.50 mm



Pin Configuration

Bottom View



Pin No.	Description
10	Input
5	Output
1,6	Ground
2,3,4,7,8,9	Case ground

Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width $+0.15$ mm/ -0.10 mm

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

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -10 to +85 °C

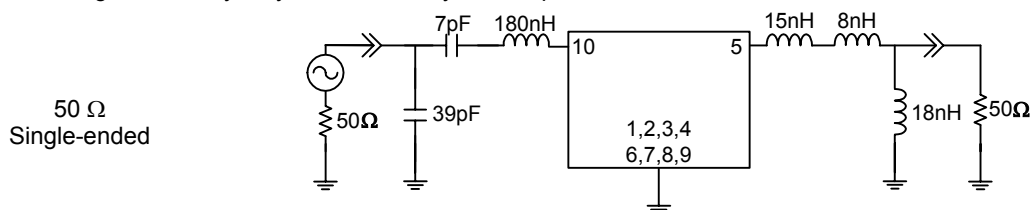
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency, F₀	-	170.6	-	MHz
Maximum Insertion Loss 170.45 - 170.75 MHz	-	7.6	9	dB
Lower 0.5dB Bandedge	-	170.40	170.51	MHz
Upper 0.5dB Bandedge	170.69	170.79	-	MHz
Lower 1dB Bandedge	-	170.37	170.45	MHz
Upper 1dB Bandedge	170.75	170.84	-	MHz
Relative Attenuation ⁽⁴⁾				
F ₀ ± 0.4 MHz	13	22	-	dB
F ₀ ± 0.6 MHz	27	31	-	dB
F ₀ ± 0.8 MHz	40	44	-	dB
F ₀ ± 1.6 MHz	43	47	-	dB
F ₀ ± 3.0 MHz	47	49	-	dB
F ₀ ± 5.8 MHz	50	56	-	dB
Amplitude Variation				
170.51 - 170.69 MHz	-	0.18	0.5	dB p-p
170.45 - 170.75 MHz	-	0.53	1	dB p-p
Group Delay Variation				
170.51 - 170.69 MHz	-	270	400	nsec
170.45 - 170.75 MHz	-	410	1000	nsec
Input/Output VSWR				
170.51 - 170.69 MHz	-	1.6:1	2.0:1	-
170.45 - 170.75 MHz	-	1.8:1	2.5:1	-
Source Impedance ⁽⁵⁾	-	50	-	Ω
Load Impedance ⁽⁵⁾	-	50	-	Ω
Substrate Material	-	Quartz	-	-

Notes:

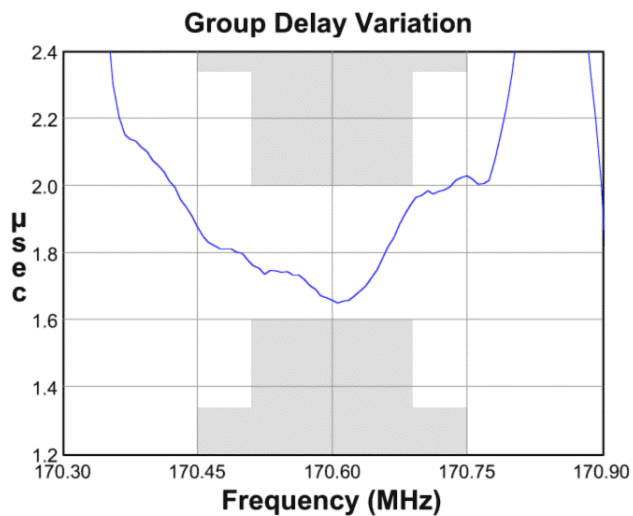
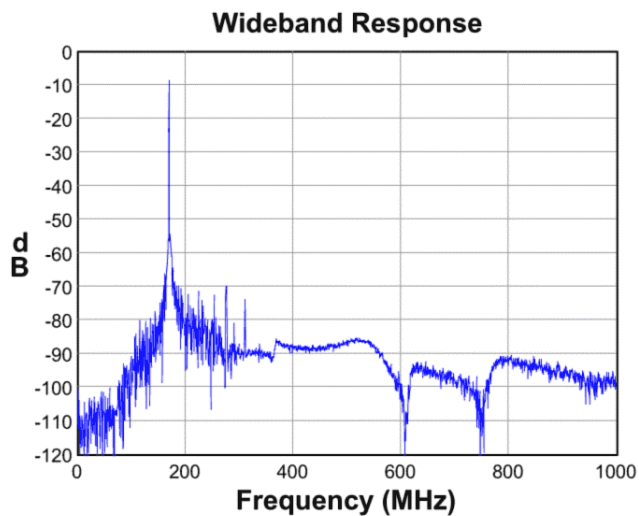
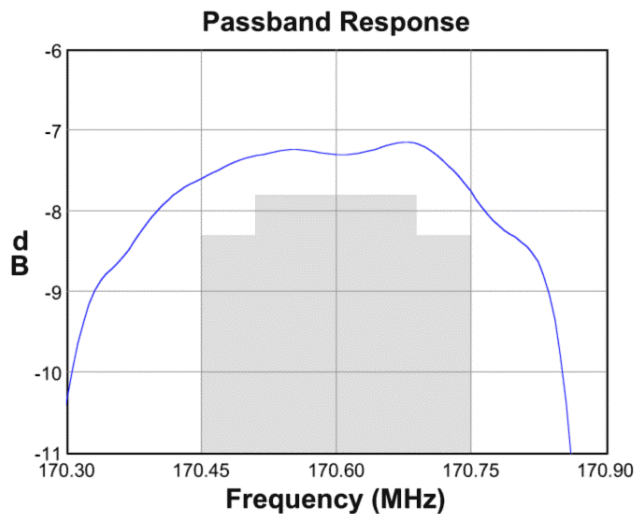
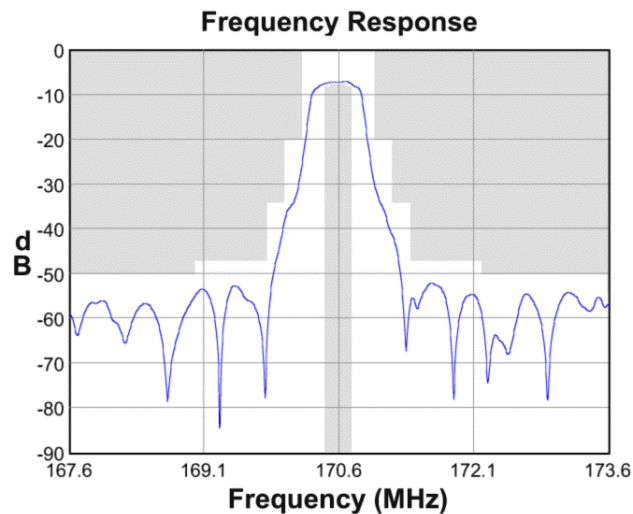
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. All attenuation measurements are made relative to center frequency
5. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

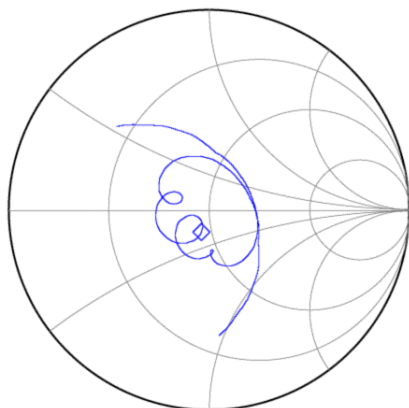
Actual matching values may vary due to PCB layout and parasitics



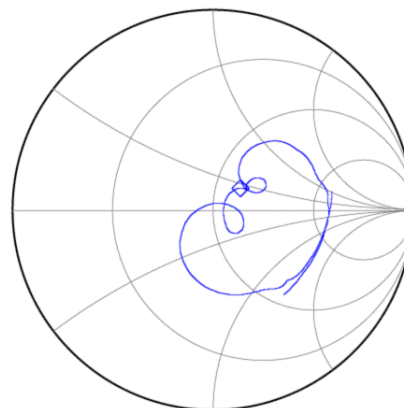
Typical Performance (at +25°C)



Input Smith Chart



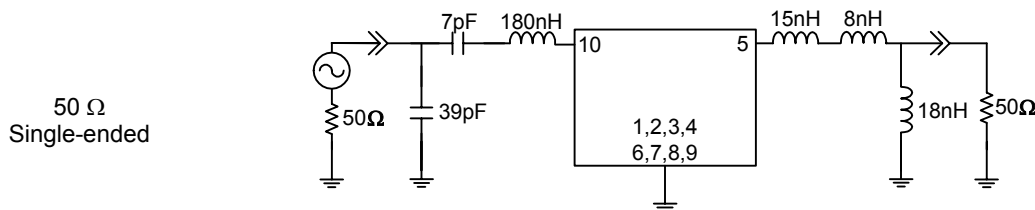
Output Smith Chart



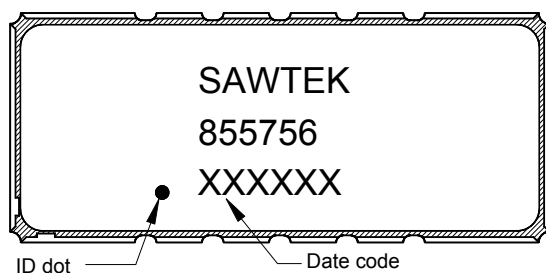
Preliminary Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

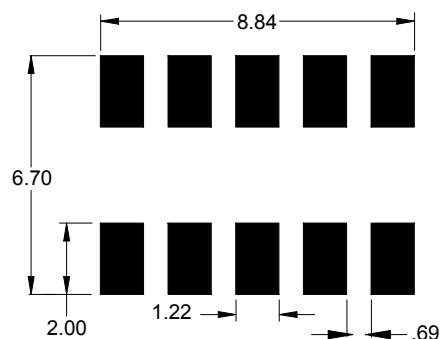


Marking



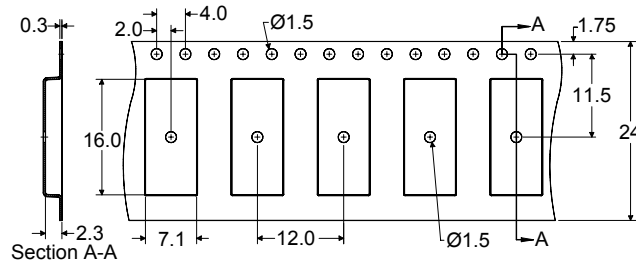
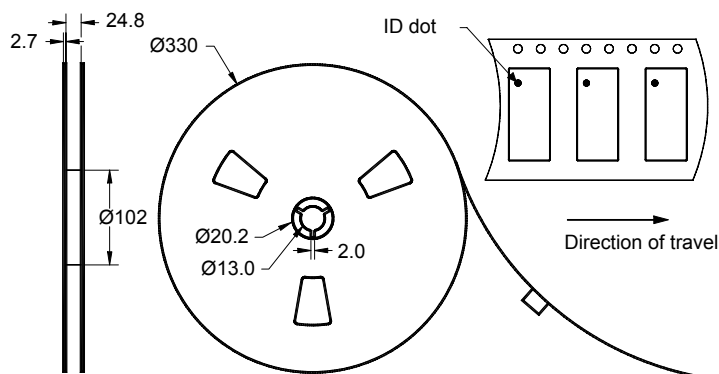
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

PCB Footprint



This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel



Dimensions shown are nominal in millimeters
Packaging quantity: 2000 units/reel

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+85	°C
Storage Temperature Range	T _{stg}	-40	+85	°C

Warnings

- Electrostatic Sensitive Device (ESD)
- Avoid ultrasonic exposure



Links to Additional Technical Information

[PCB Layout Tips](#)[Qualification Flowchart](#)[Soldering Profile](#)[S-Parameters](#)[Other Technical Information](#)

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[Representatives or distributors](#)