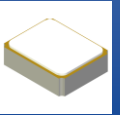


SMD 915 MHZ SAW FILTER



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2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

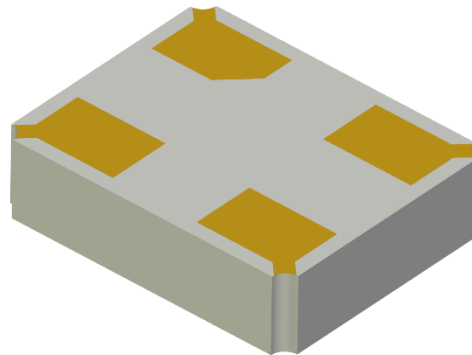
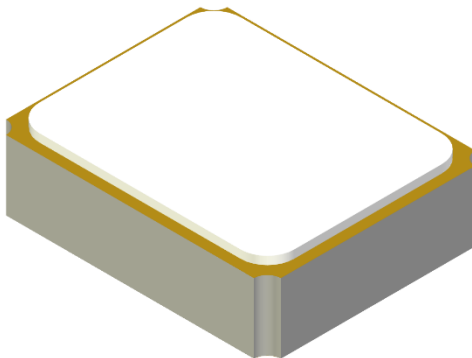
Features

- Compact Size: 2.0 x 1.6 x 0.9 mm
- Frequency Range: 902~928 MHz
- Insertion Loss: 1.7 dB (Typ.)
- Out-of-Band Rejection: > 35 dB
- +105°C maximum Operating Temperature
- Max Input Power: +15 dBm
- 50 Ohms Single-Ended Input & Output

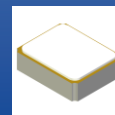
Applications

- RF Modules
- Sub-GHz LoRa/Sigfox/Wi-Fi HaLow
- Internet of Things (IoT)
- Smart Metering
- Smart Lighting

Product Image



SMD 915 MHZ SAW FILTER



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2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (fc)	-	915	-	MHz	
Bandwidth	-	26	-	MHz	
VSWR ⁽¹⁾	-	1.5	2.0	:1	902 ~ 928MHz
Insertion Loss ⁽¹⁾	-	1.7	2.5	dB	902 ~ 928MHz
Amplitude Ripple ⁽¹⁾	-	0.4	0.8	dB	902 ~ 928MHz
Group Delay ⁽¹⁾	-	32.2	43.7	ns	902 ~ 928MHz
Group Delay Ripple ⁽¹⁾	-	2.83	17.53	ns	902 ~ 928MHz
Attenuation ⁽²⁾ (Reference level from 0 dB)	40	55	-	dB	698~894 MHz
	35	48	-	dB	10MHz ~ 857.5MHz
	35	48	-		857.5MHz ~ 882.5MHz
	45	52	-		970MHz ~ 1005MHz
	30	35	-		1005MHz ~ 1110MHz
Source Impedance ⁽³⁾ (single ended)	-	50	-	Ω	
Load Impedance ⁽³⁾ (single ended)	-	50	-	Ω	
DC Voltage	-	-	3	V	
RF Power Dissipation	-	-	15	dBm	

Notes: (1) Averaged values of linear S-Parameters at +25°C

(2) Averaged values of linear S-Parameters at +25°C

(3) A matching network is unnecessary (refer to the Measurement Circuits section).

Mechanical Specification

Parameters	Specifications
Filter Dimension	2.0 x 1.6 x 0.9 mm
Mounting Type	Surface Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-40°C ~ +105°C
Storage Temperature Range	-40°C ~ +105°C
MSL level	1

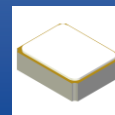


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SMD 915 MHZ SAW FILTER



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Check Inventory



2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Ordering Information

Part Number	Description
AFS20A26-915.00	SMD 915 MHZ SAW FILTER on Cut Tape
AFS20A26-915.00-T3	SMD 915 MHZ SAW FILTER on Tape & Reel
AFS20A26-915.00-EVB	SMD 915 MHZ SAW FILTER Evaluation Board

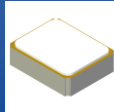
Note: Other options not listed may be available upon request via [Abracon online support](#)



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Request Samples

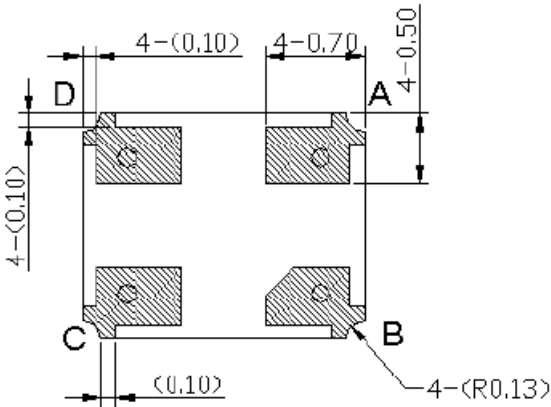
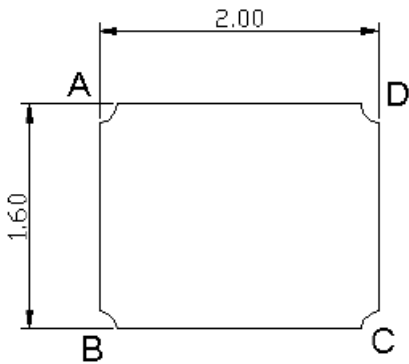


Check Inventory



2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

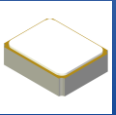
Product Dimensions



Unit : mm

Pin No.	Description
B	Input
D	Output
A, C	Ground

SMD 915 MHZ SAW FILTER



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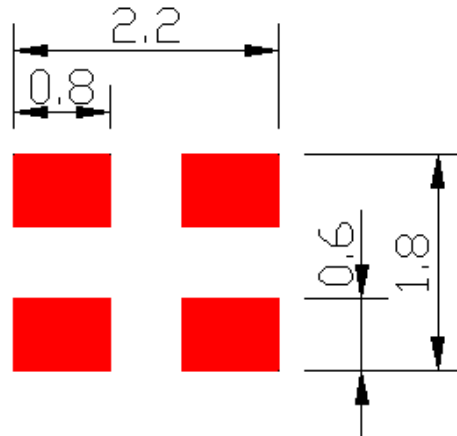


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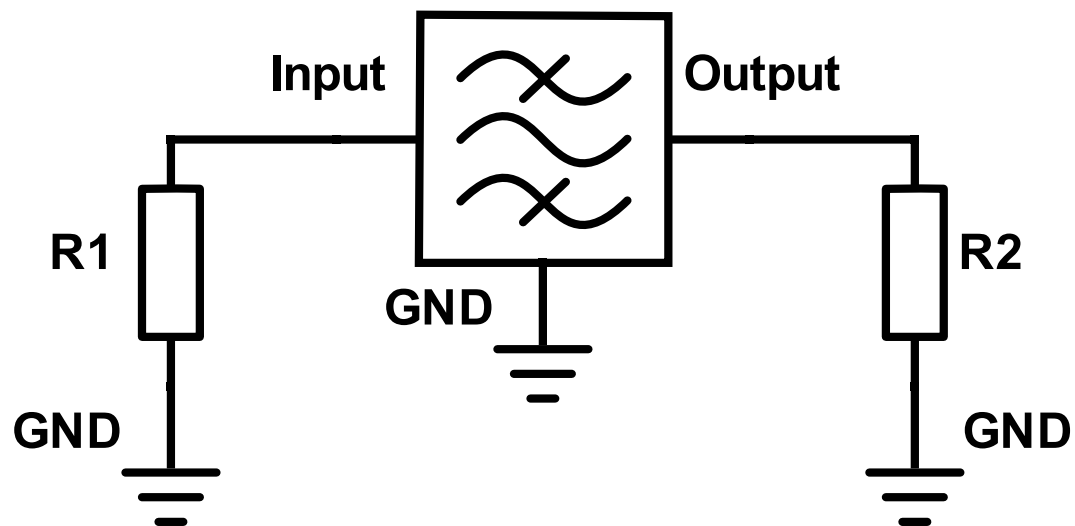
2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Land Pattern



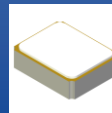
Unit : mm

Measurement Circuit



Pin No.	Description
B	Input (R1): 50 Ω
D	Output (R2): 50 Ω
A, C	Ground

SMD 915 MHZ SAW FILTER



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Request Samples



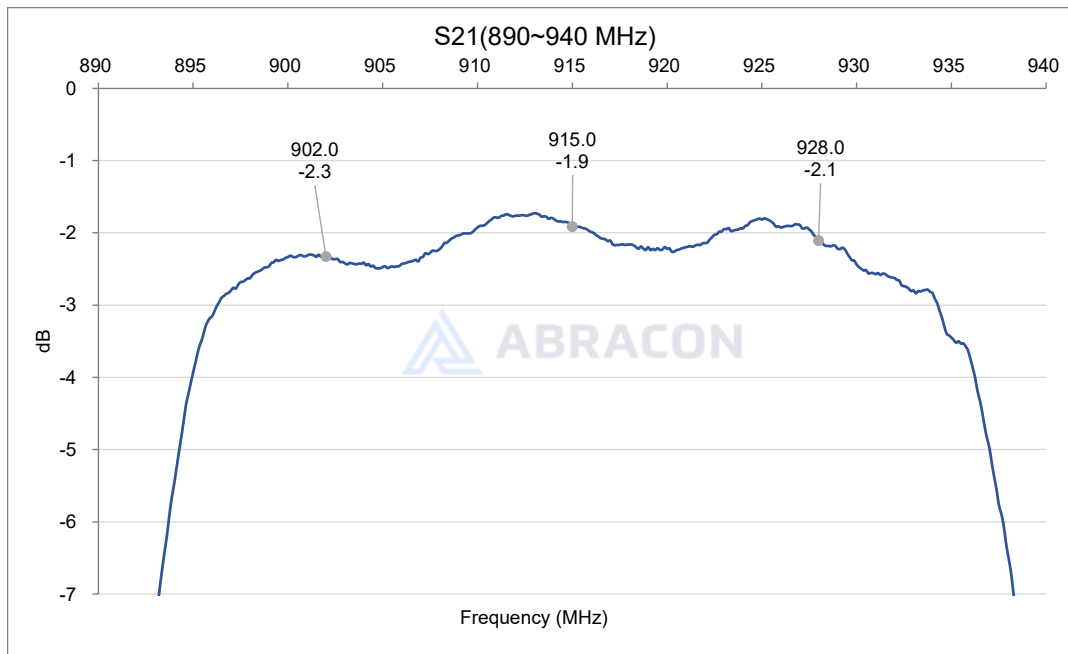
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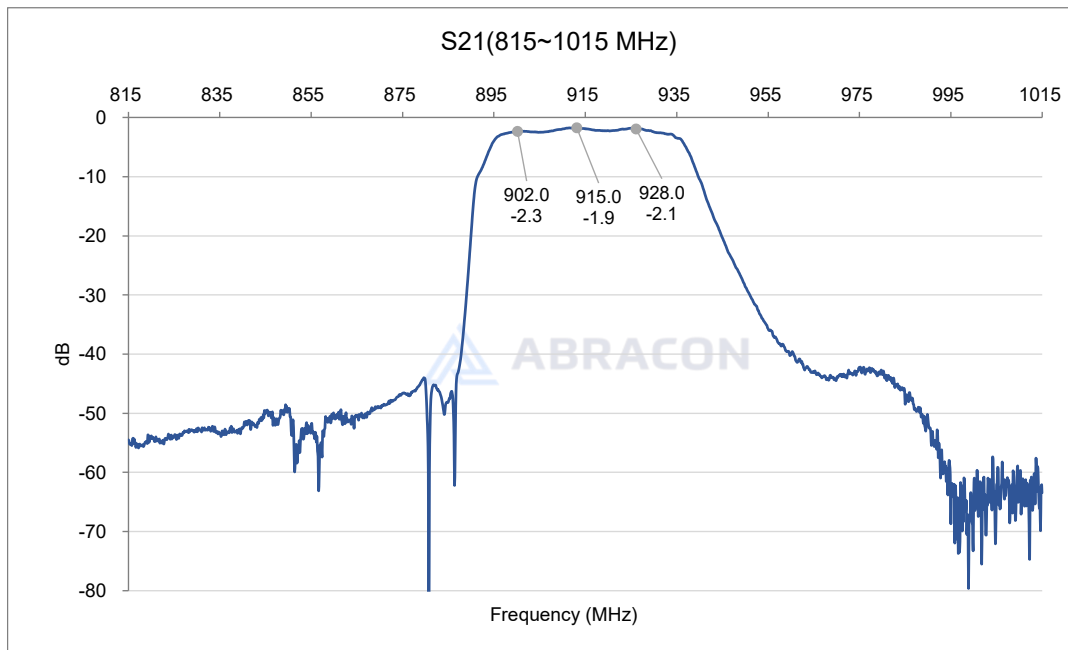
2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Frequency Characteristics

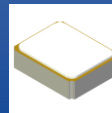
S21 narrow band



S21 wide band



SMD 915 MHZ SAW FILTER



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Request Samples

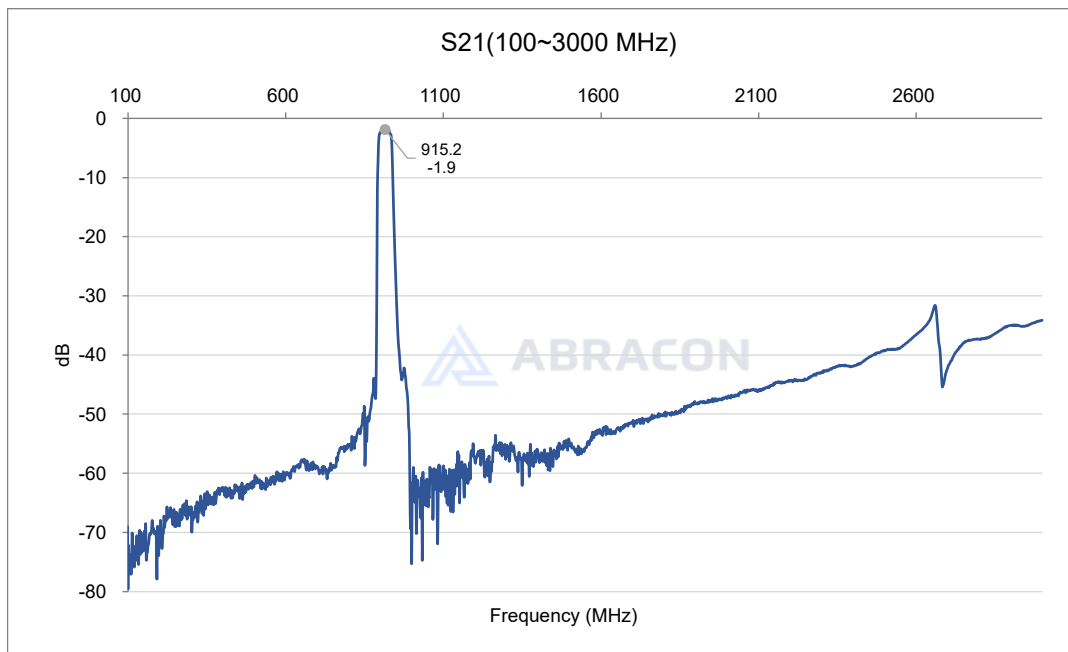


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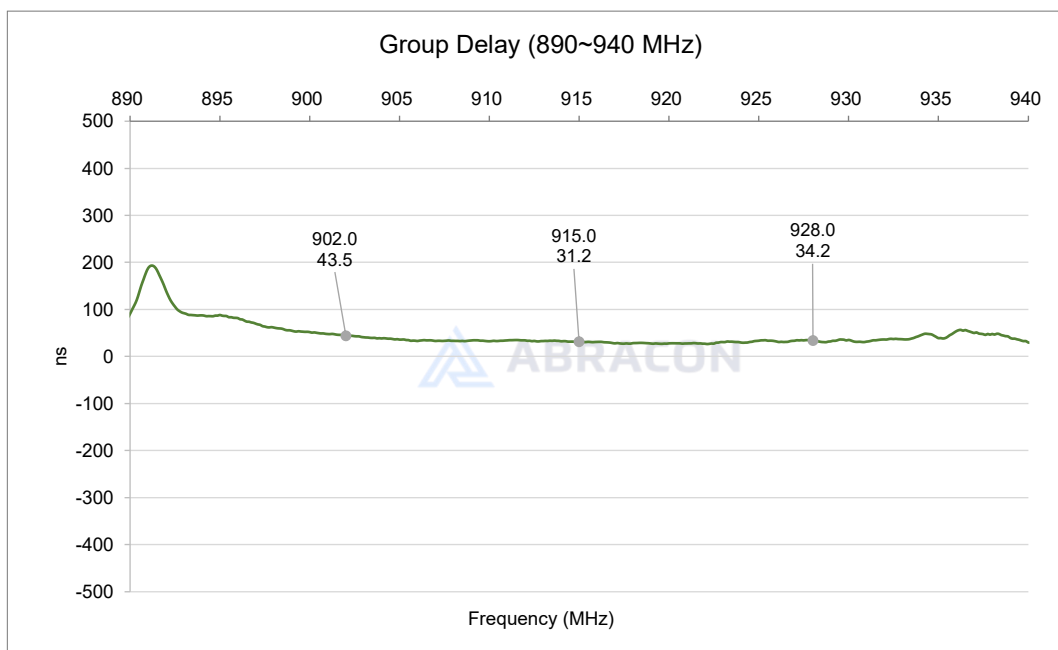


2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

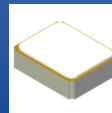
S21 wide band



Group Delay



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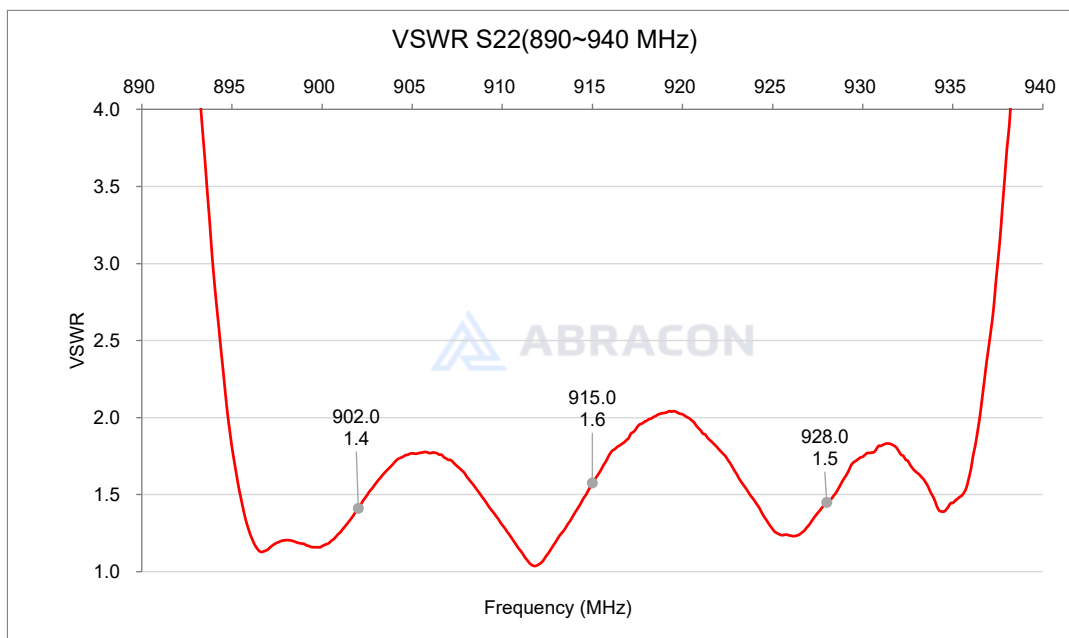
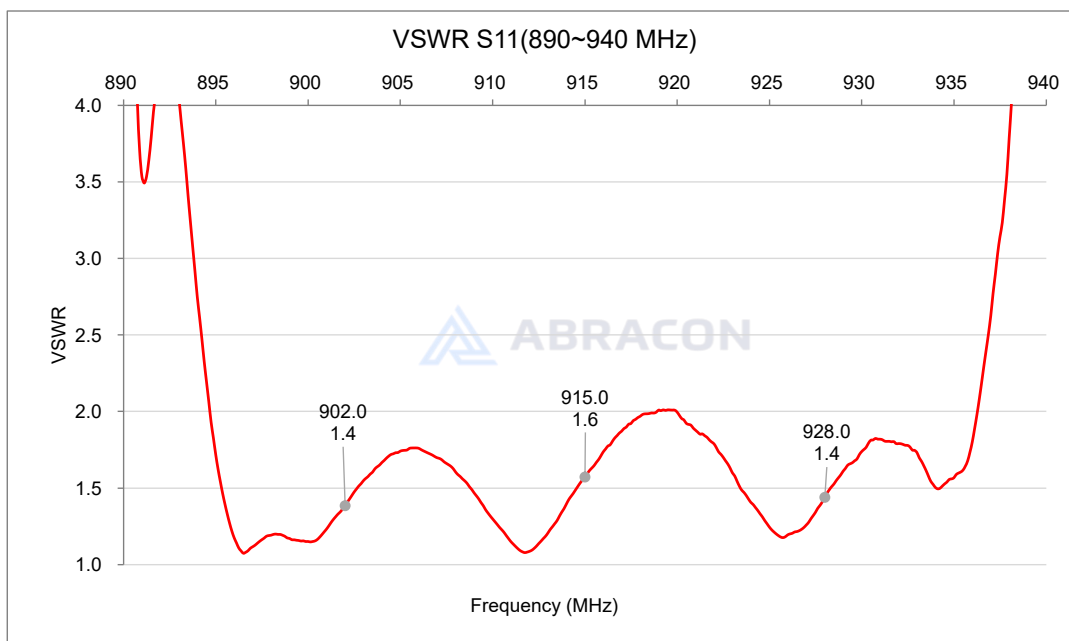


Check Inventory

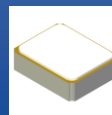


2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

VSWR (S11 & S22)



SMD 915 MHZ SAW FILTER



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Request Samples



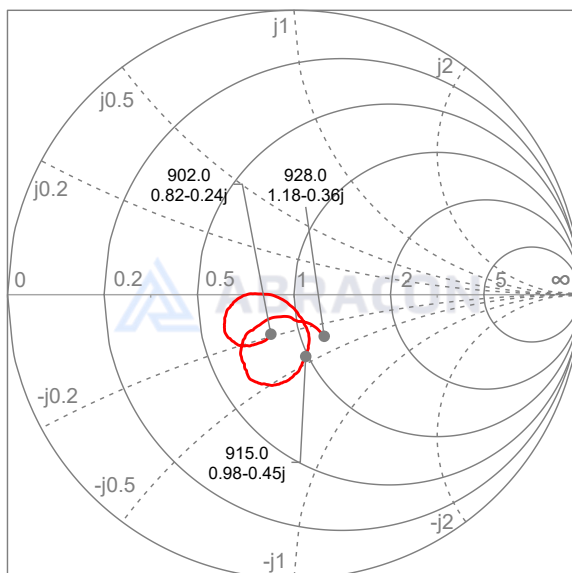
Check Inventory



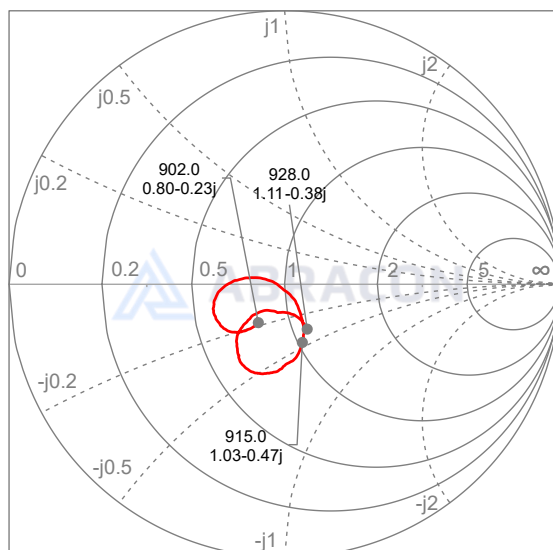
2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Smith Chart (S11 & S22)

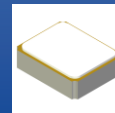
Smith chart S11 (902~928MHz)



Smith chart S22 (902~928MHz)



SMD 915 MHZ SAW FILTER



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Check Inventory



2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Reflow Profile [JEDEC J-STD-020]

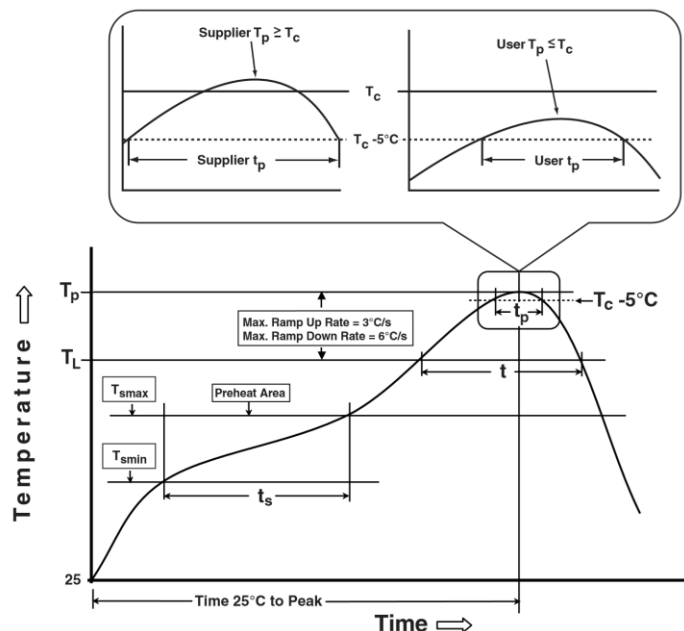


Table 1

SnPb Eutectic Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5mm	235°C	220°C
≥2.5mm	220°C	220°C

Table 2

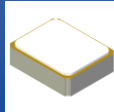
Pb-Free Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	180°C
Time (T_{smin} to T_{smax}) (t_s)	60 – 120 sec.	60 – 90 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	220°C
Time at Liquidous (T_L)	60 – 150 sec.	50 – 80 sec.
Peak package body temperature (T_p)*	See Table 1	See Table 2
Time (T_p)* within 5°C of the specified classification temperature (T_c)	20 sec.	20 ~ 40 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.



SMD 915 MHZ SAW FILTER

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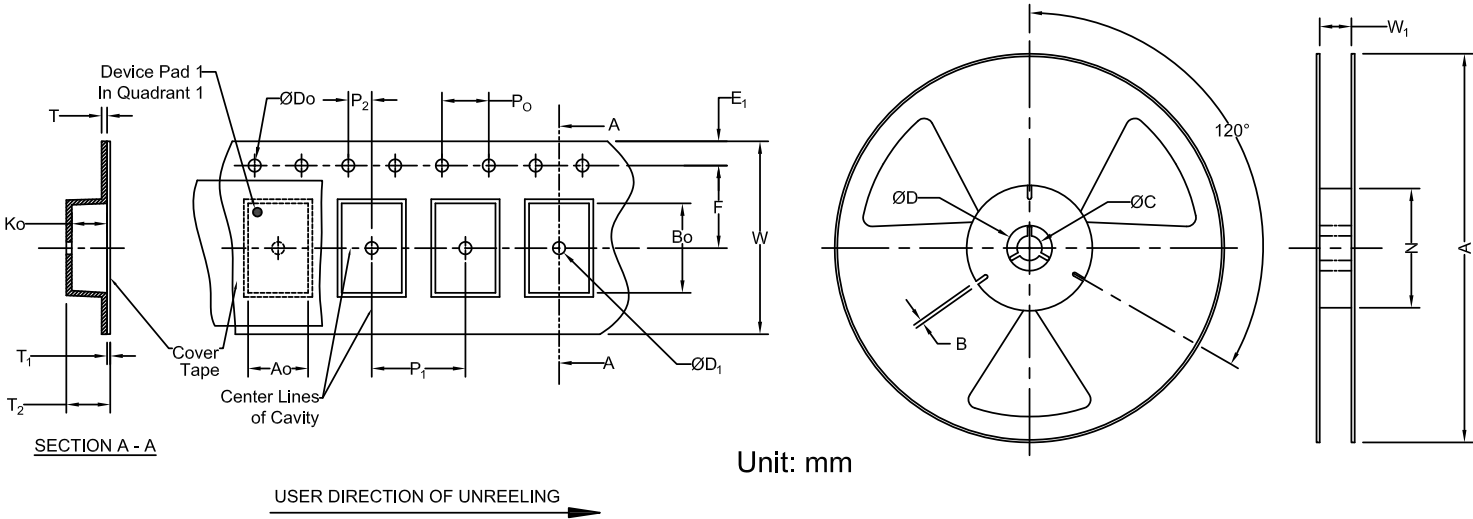
Check Inventory



2.0 x 1.6 x 0.9 mm
RoHS Compliant
MSL Level = 1

Packaging

Tape & Reel Dimension



Carrier Tape Specifications (mm)

E1	D0	D1	P0	F	P1	P2	W	A0	B0	K0	Reel Qty
1.75 ± 0.1	1.55 ± 0.05	0.5 ± 0.05	4.0 ± 0.1	3.5 ± 0.05	4.0 ± 0.1	2.0 ± 0.05	8.0 ± 0.3	1.9 ± 0.05	2.3 ± 0.05	0.9 ± 0.05	3,000

Reel Specifications (mm)

A	W ₁	N	B	C	D
330 ± 1.0	12.0 ± 1.0	100 ± 1.0	2.0 ± 0.5	13 ± 0.5	20.2 min

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