

SMD 915MHz SAW Filter

ABSES5AD-1E3M012M

Request Samples



Check Inventory



1.4 x 1.1 x 0.7 mm
RoHS Compliant

Features

- Small Form Factor 1.40 x 1.1 x 0.70 mm
- Low Insertion Loss
- Industrial Grade -40°C ~ +85°C
- Maximum Input Power: 10dBm
- RoHS Compliant

Applications

- RF Modules
- Remote controls
- IOT equipment
- Information & Communications Devices

Electrical Specifications

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (fc)	-	915	-	MHz	-
Insertion Loss	-	1.6	2.6	dB	902 - 928 MHz
Amplitude Ripple	-	0.6	1.5	dB	902 - 928 MHz
Attenuation	50.0	53.0	-	dB	0.10 - 702.00 MHz
	49.0	53.0	-		738.00 - 764.00 MHz
	42.0	50.0	-		820.00 - 846.00 MHz
	42.0	50.0	-		990.00 - 1010.00 MHz
	49.0	53.0	-		1072.00 - 1092.00 MHz
	40.0	42.0	-		1128.00 - 1804.00 MHz
	40.0	42.0	-		1804.00 - 1856.00 MHz
	30.0	36.0	-		1856.00 - 3000.00 MHz
Group Delay	-	15	50	ns	902 - 928 MHz
VSWR	-	1.5	2.0	-	902 - 928 MHz
Input Power Level	-	-	10	dBm	
DC Voltage (V)	-	-	3	V	

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Mechanical Specifications

Parameters	Specifications
Dimension	1.4 x 1.1 x 0.7 mm
Mounting Type	SMD Mount

Environmental Specifications

Parameters	Specifications
Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range	-40°C ~ +85°C
MSL level	MSL 3
ESD	N/A

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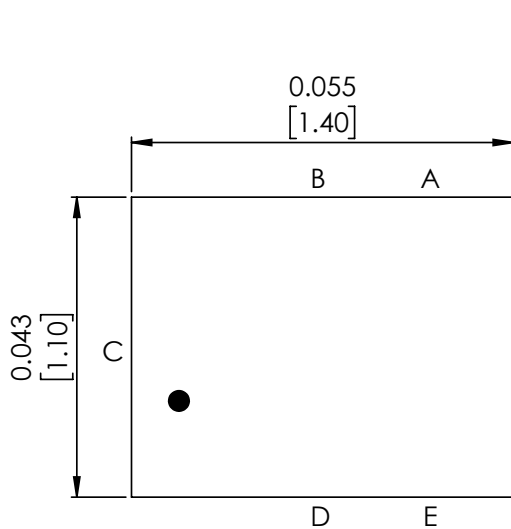


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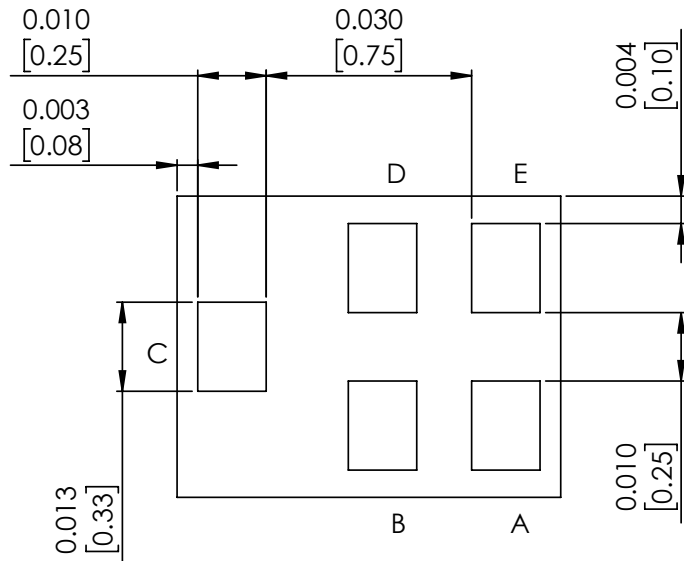


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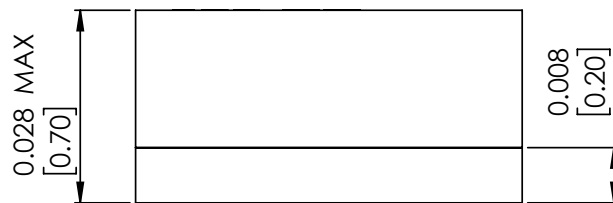
Package Dimensions



TOP VIEW



BOTTOM VIEW



FRONT VIEW

Unit: inches [mm]

Pin No.	Description
C	Input
A	Output
B,D	Case Ground
E	To be Grounded

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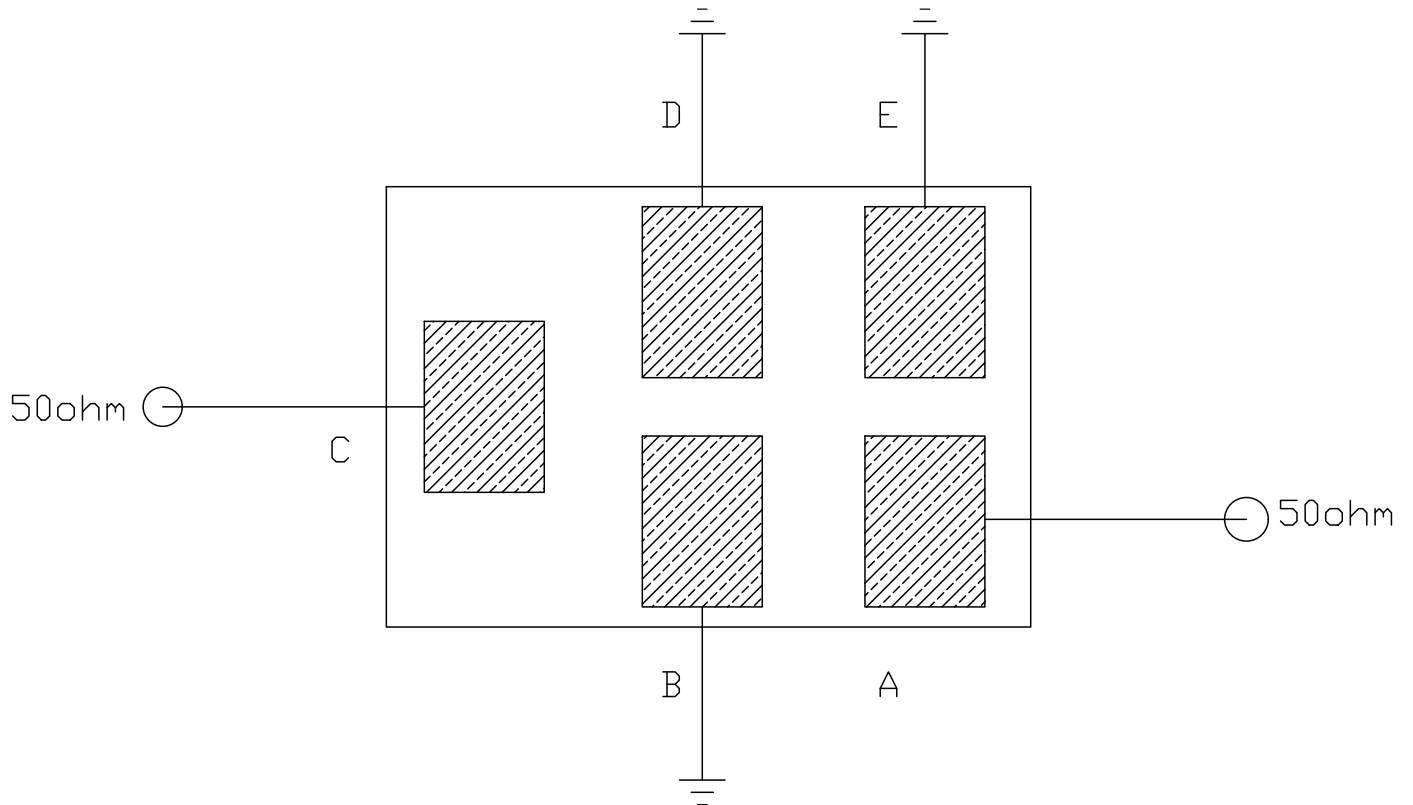


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Measurement Circuit



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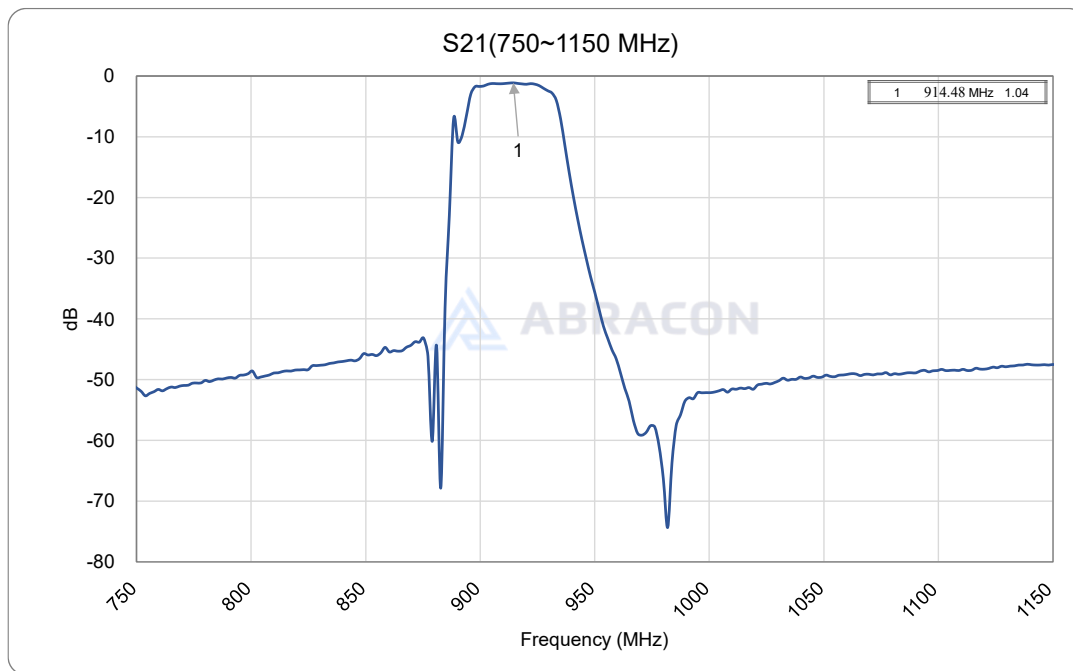
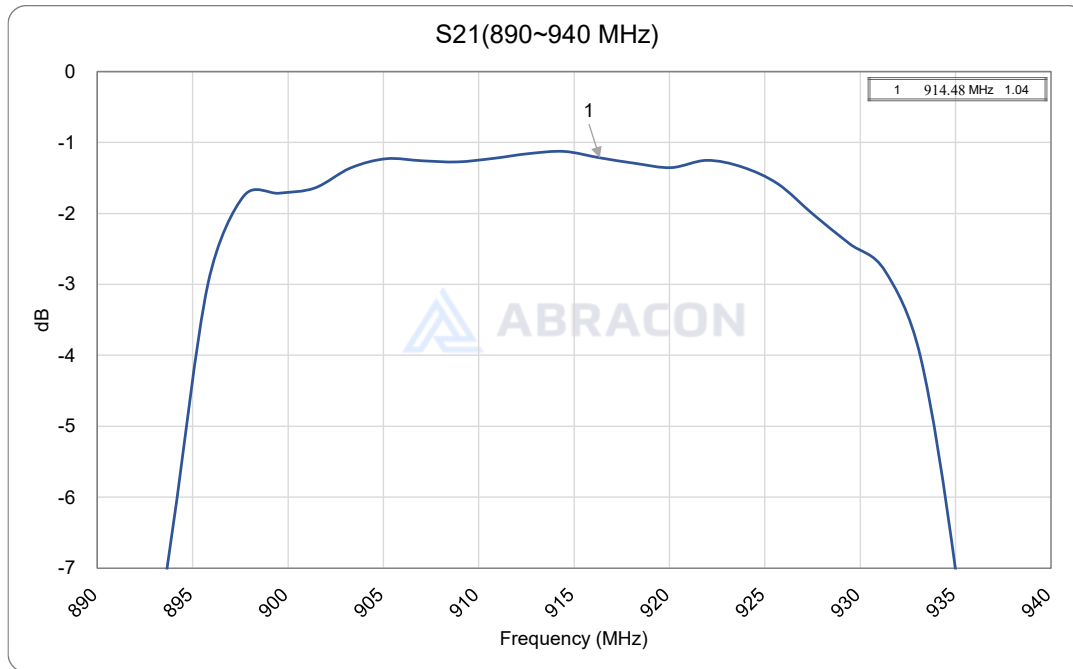
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Frequency Characteristics

S21 narrow band



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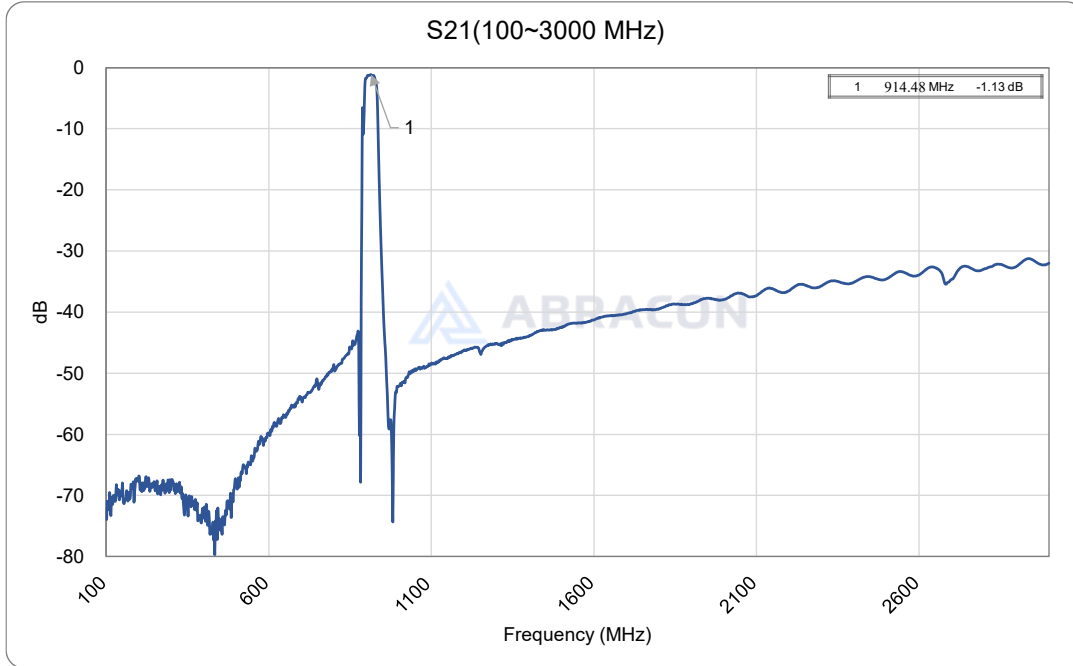


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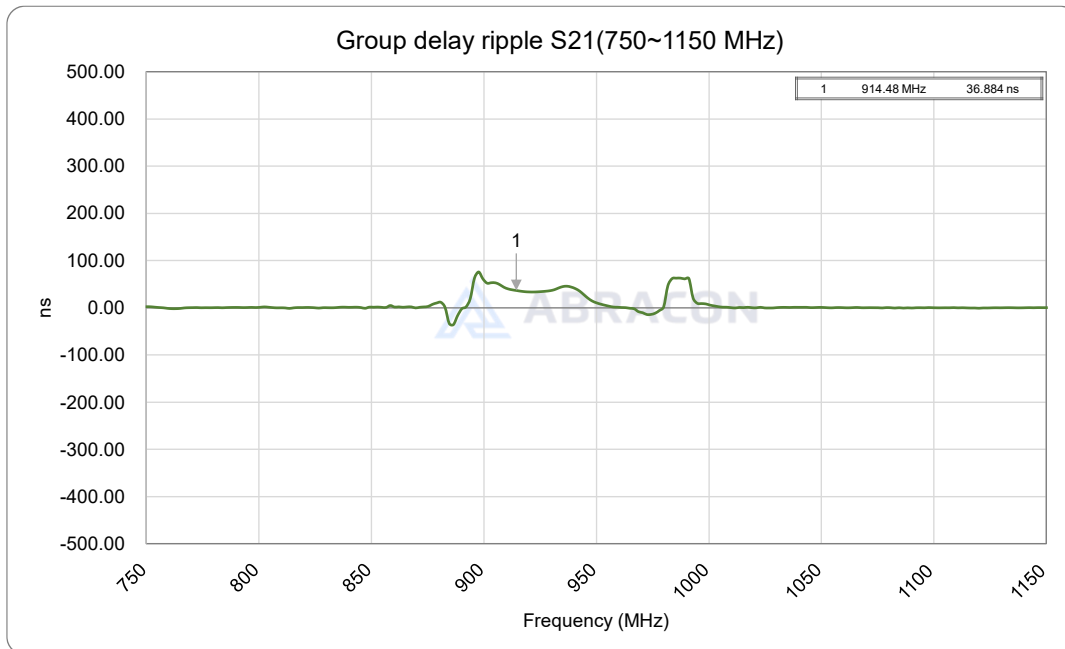


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S21 wide band



Group Delay Ripple



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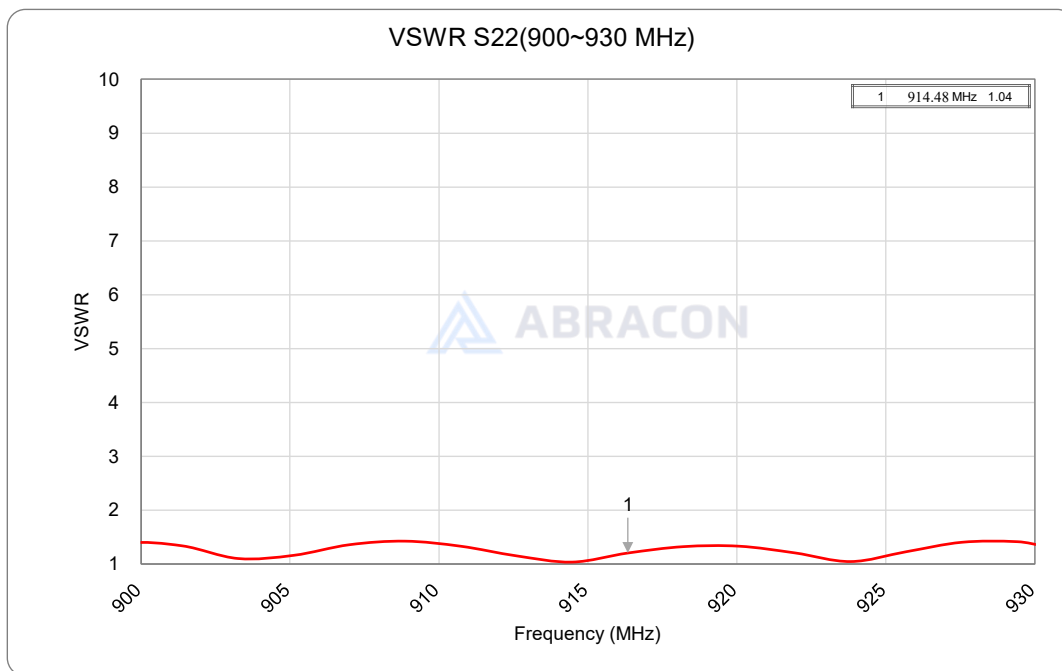
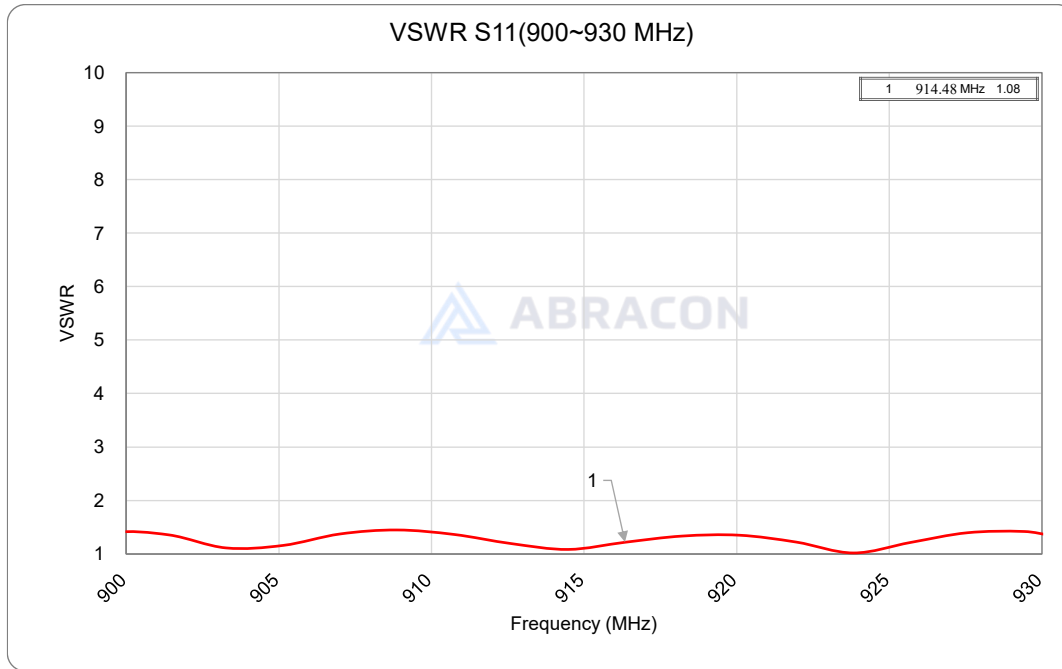


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VSWR (S11 & S22)



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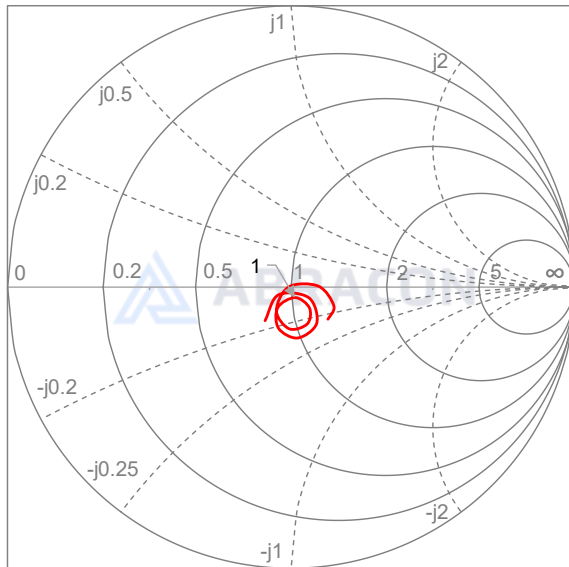
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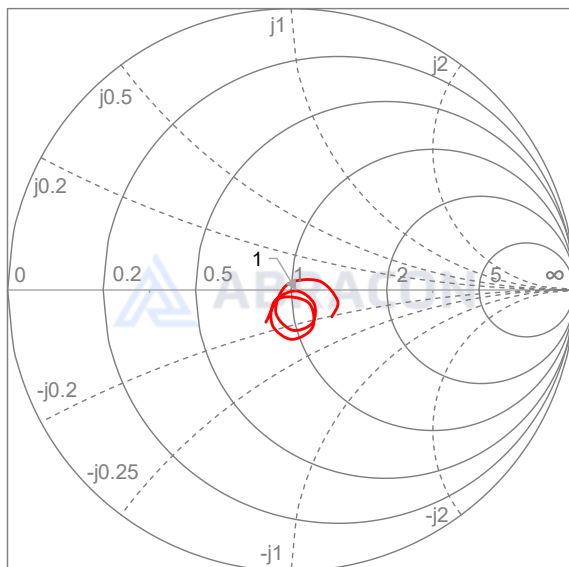
Smith Chart (S11 & S22)

Smith chart S11 (900~930MHz)



1	914.48 MHz	51.2334 Ω	-3.8451 Ω	45 pF
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Smith chart S22 (900~930MHz)



1	914.48 MHz	51.8932 Ω	-0.3703 Ω	470 pF
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Reflow Profile [JEDEC J-STD-020]

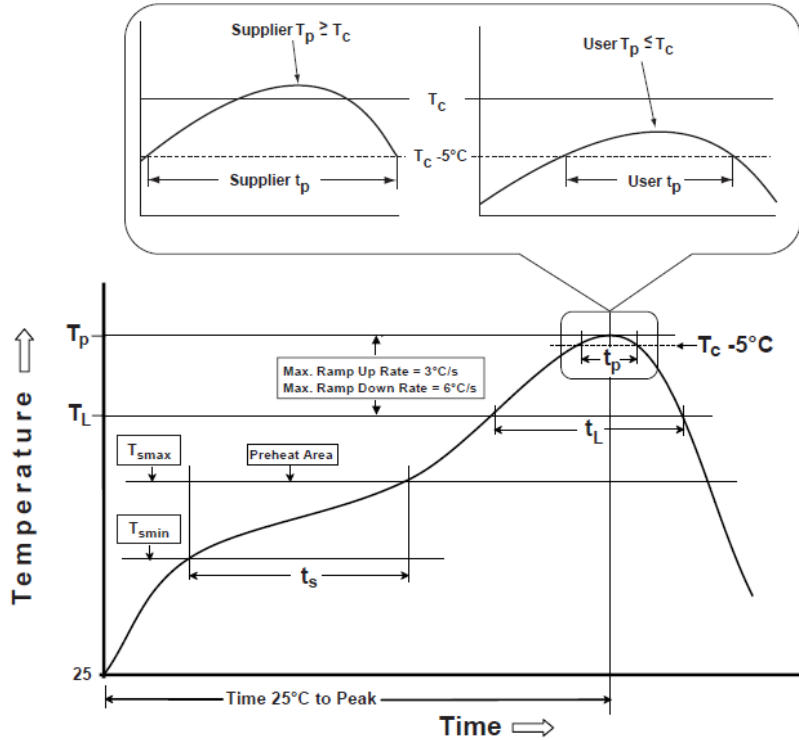


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)		
Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	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
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	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	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 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.	30 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 supplier minimum and a user maximum.

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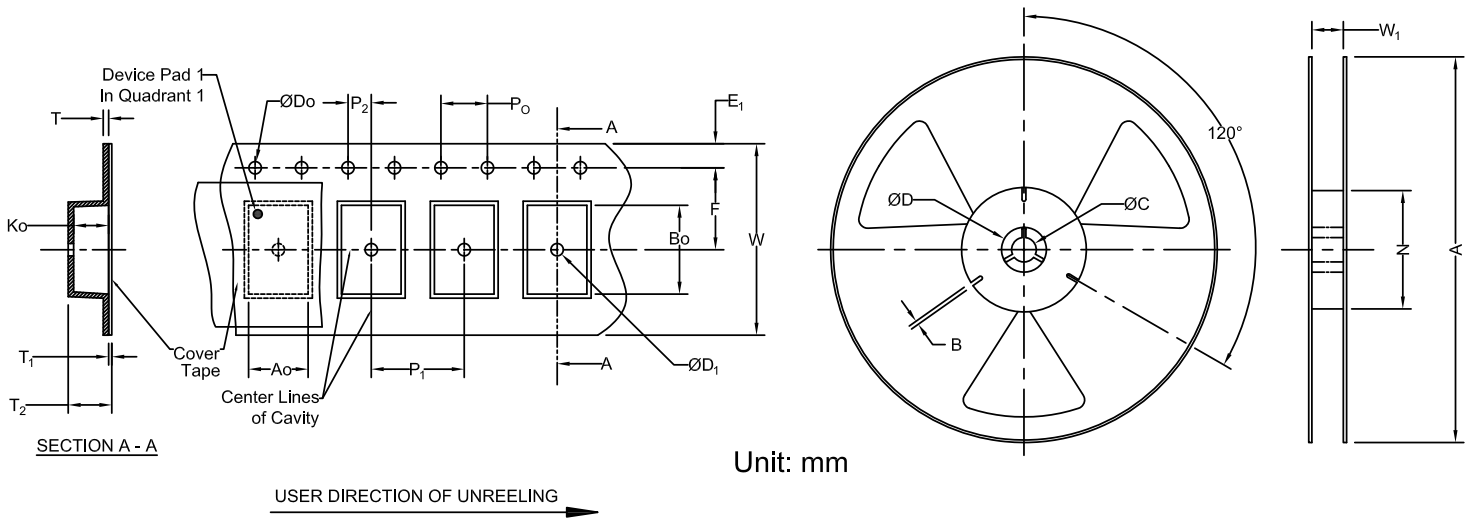


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Packaging

Tape & Reel (10,000 pcs / reel)

1. Tape & Reel Dimension



Carrier Tape Specifications (mm)

Do	D ₁	E ₁	P ₀	P ₂	T	F	P ₁	W	A ₀	B ₀	K ₀	Reel Qty
1.50 ± 0.1	0.5 ± 0.1	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	0.2 ± 0.03	3.5 ± 0.05	2.0 ± 0.1	8.0 ± 0.3	0.95 ± 0.05	1.15 ± 0.05	0.68 ± 0.04	10,000

Reel Specifications (mm)

A	W ₁	N	C	B
178.0 ± 0.05	9.0 ± 0.3	60 ± 0.2	13.3 ± 0.2	2.2 ± 0.2

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