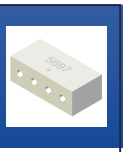
5697 MHz SMD Dielectric Filter



AFII-DF-0035

Request Samples | Check Inventory

8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

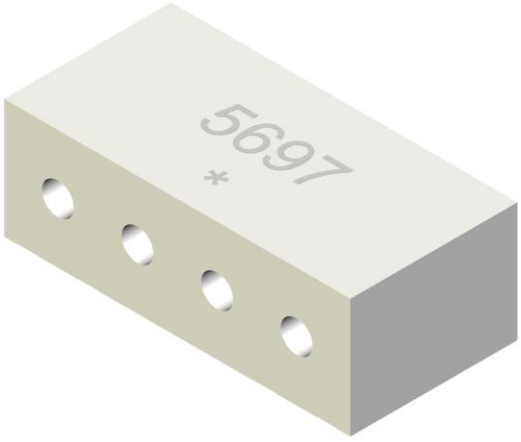
Features

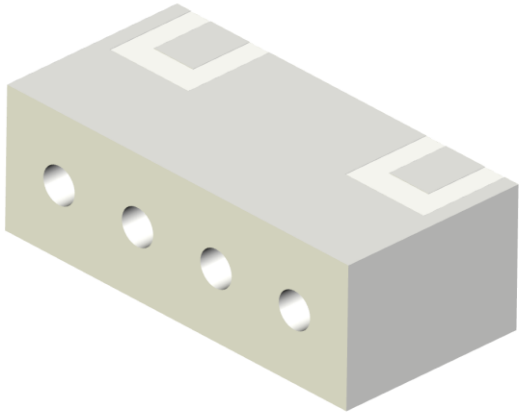
- Bandpass Dielectric Filter with 360 MHz bandwidth
- Surface Mount 8.7 x 4.0 x 3.0 mm package
- Single-Ended Input and Output
- Excellent selectivity with high out-of-band rejection
- RoHS Compliant

Applications

- WiFi 6E/7 Access Points and Routers
- Industrial IoT
- Enterprise Networks
- 5 GHz (U-NII-2C / U-NII-3)

Product Image





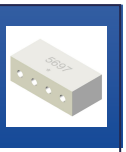
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8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (fc)	-	5697.0	-	MHz	
Bandwidth	-	360	-	MHz	5490 – 5850 MHz
Insertion Loss	-	1.1 (1)	2.5 (1)	dB	5490 – 5850 MHz
VSWR		≤ 2.0			5490 – 5850 MHz
Amplitude Ripple	-	-	1.3	dB_{p-p}	5490 – 5850 MHz
Attenuation	50	-	-	dB	5150 ~ 5330 MHz
Input Power			1	W	
Source Impedance (2) (single ended)	-	50	-	Ω	
Load Impedance (2) (single ended)	-	50	-	Ω	

Notes: (1) The typical insertion loss is the average value measured at +25°C, while the maximum insertion loss is measured over the temperature range of -40°C to +85°C..
(2) No matching network needed (Ref. Testing Environment Circuit as shown in "Measurement Circuit" section).

Mechanical Specification

Parameters	Specifications
Dimension	8.7 x 4.0 x 3.0 mm
Mounting Type	SMD Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-40ºC ~ +85ºC
Storage Temperature Range	-40ºC ~ +85ºC
RoHS Compliant	Yes

Ordering Information

Part Number	Description
AFII-DF-0035	5697 MHz SMD Dielectric Filter
AFII-DF-0035-EVB	5697 MHz SMD Dielectric Filter Evaluation Board

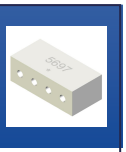
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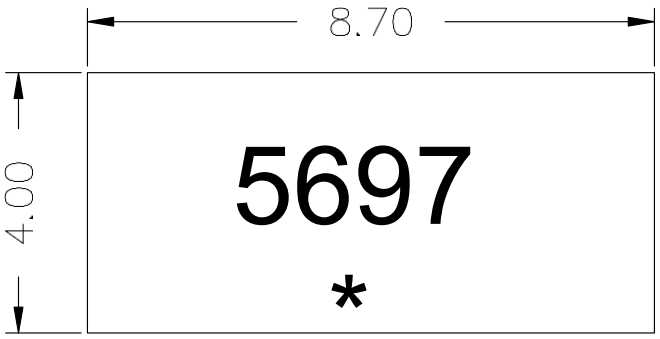
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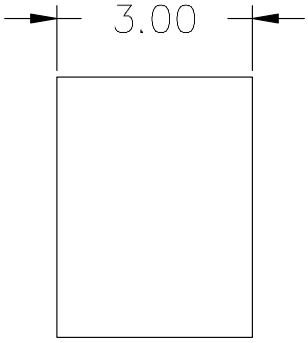
8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Product Dimensions

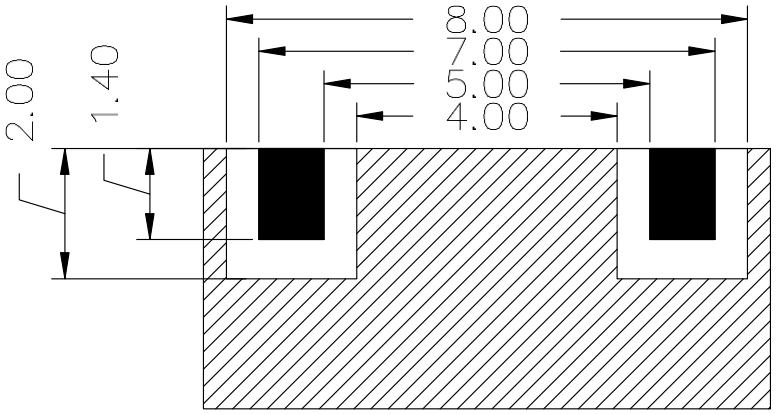
TOP VIEW



SIDE VIEW



BOTTOM VIEW



I/O PORT

GROUND

TOLERANCE : ±0.20
UNIT: mm
*: MONTH CODE

Unit : mm

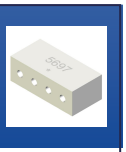
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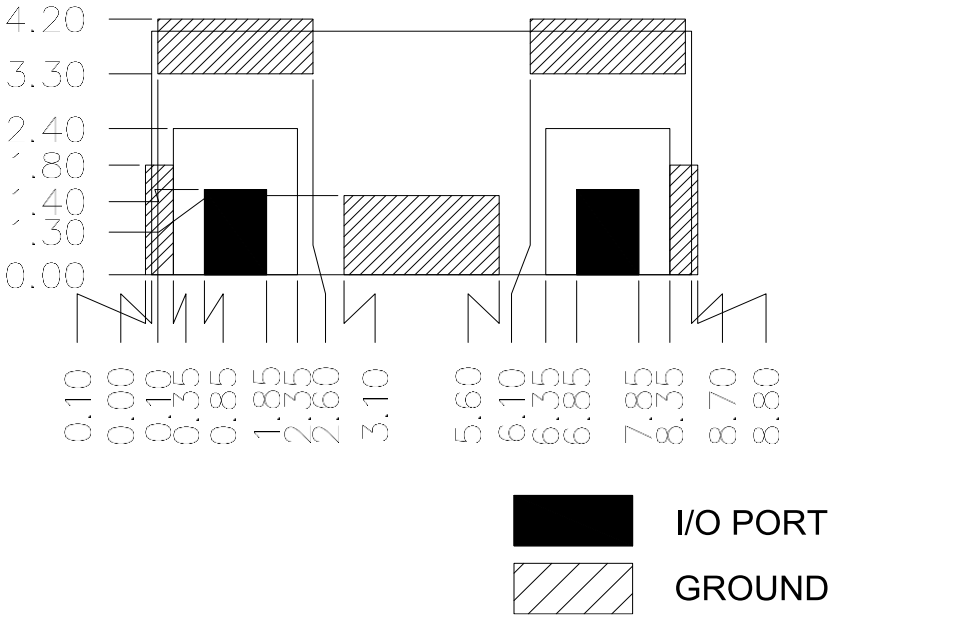
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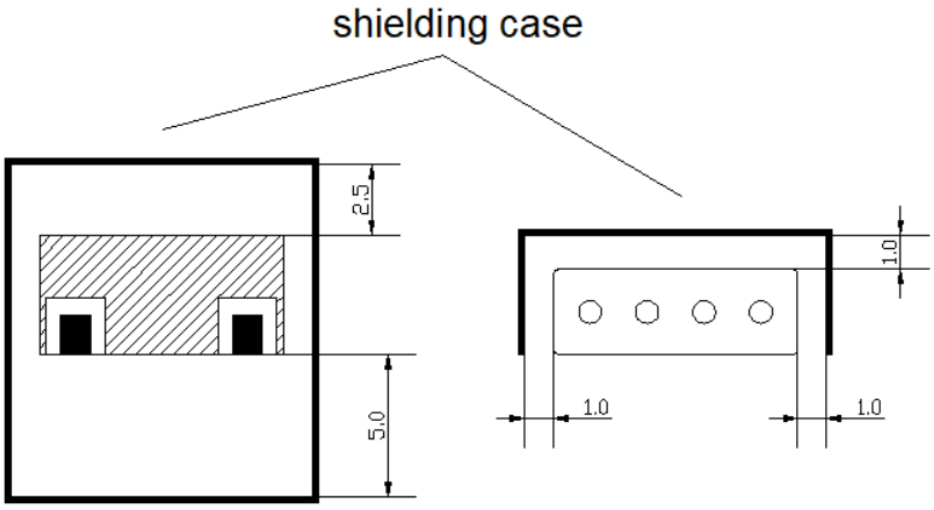
8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

PCB Footprint & Shielding Case Layout Guide

Please reach out to us for more detailed layout info via Abracon online support



Unit : mm



Unit : mm

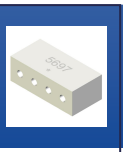
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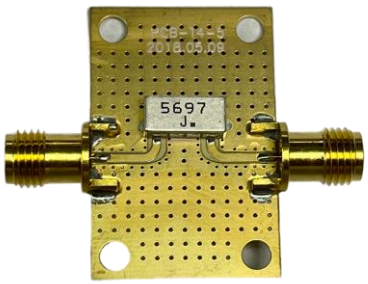
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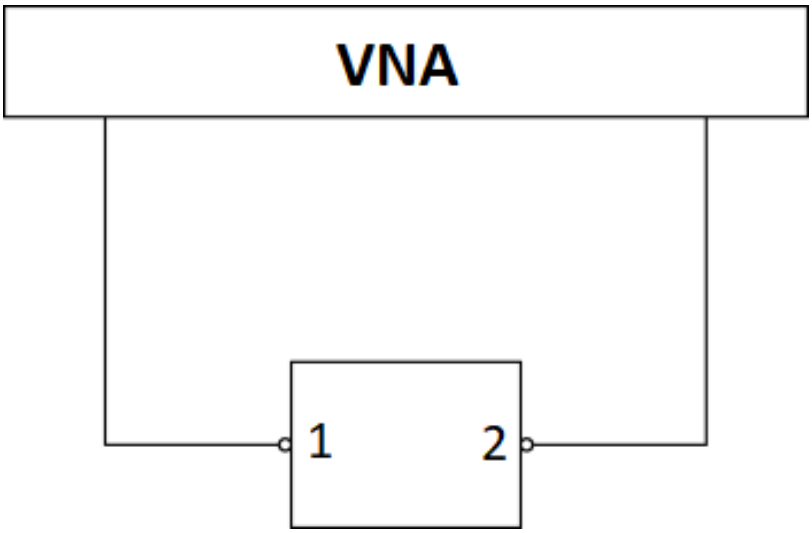
Request Samples

Check Inventory

8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Measurement Circuit





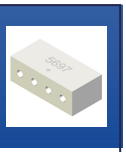
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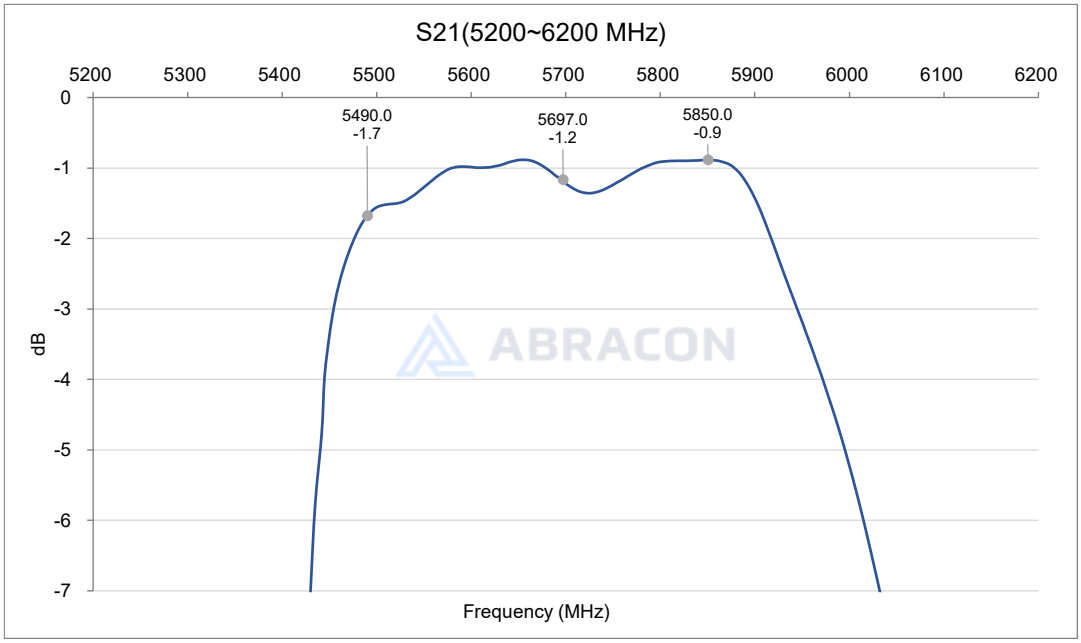
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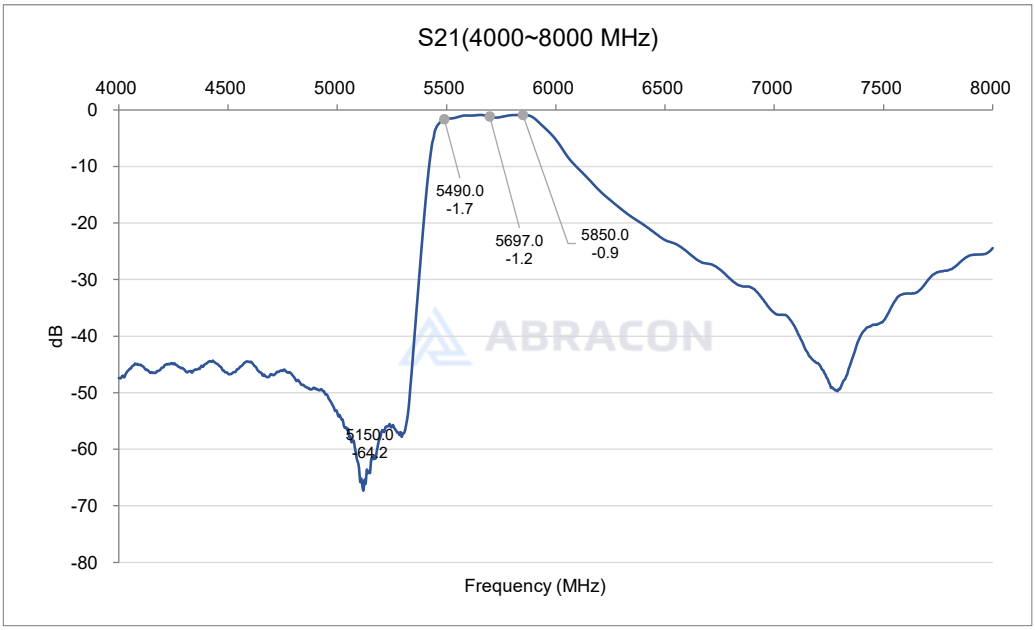
8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Frequency Characteristics

S21 narrow band



S21 wide band



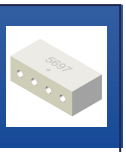
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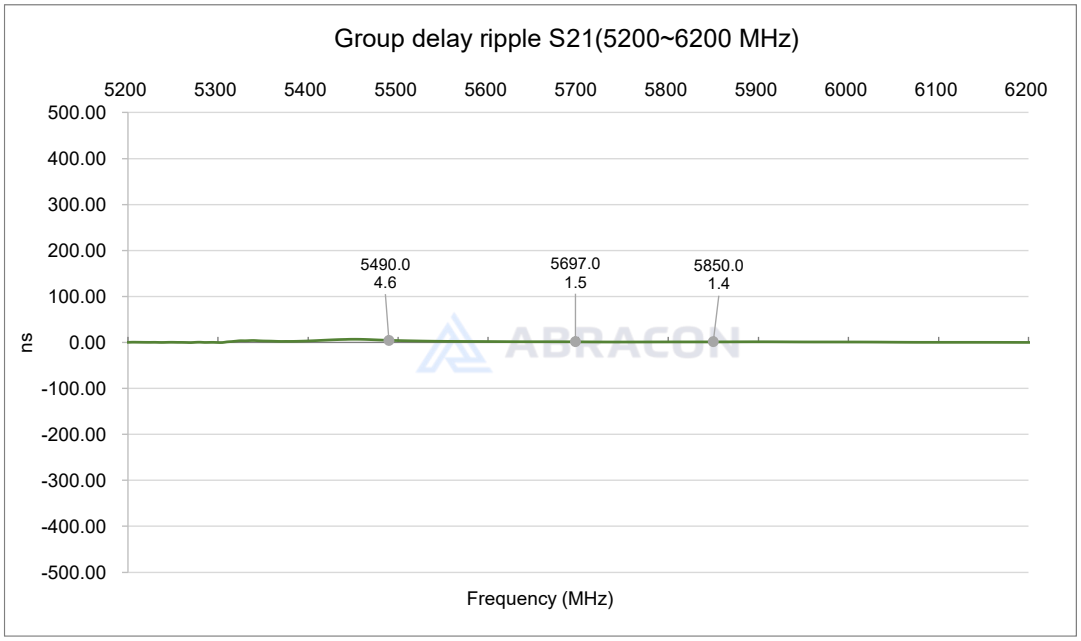


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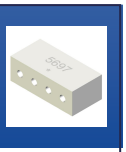
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8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Group Delay Ripple



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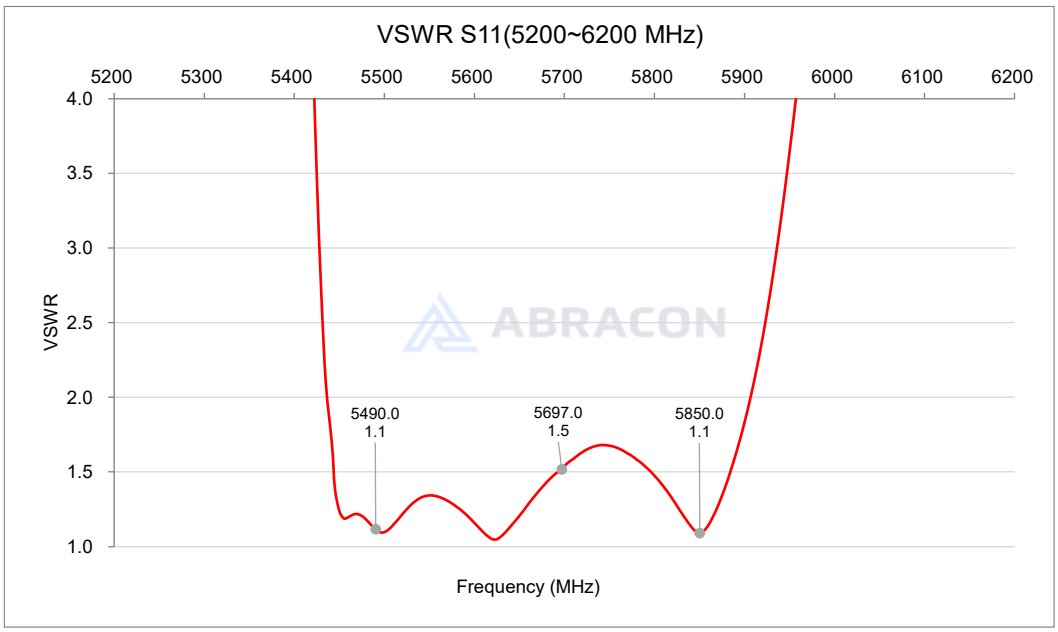


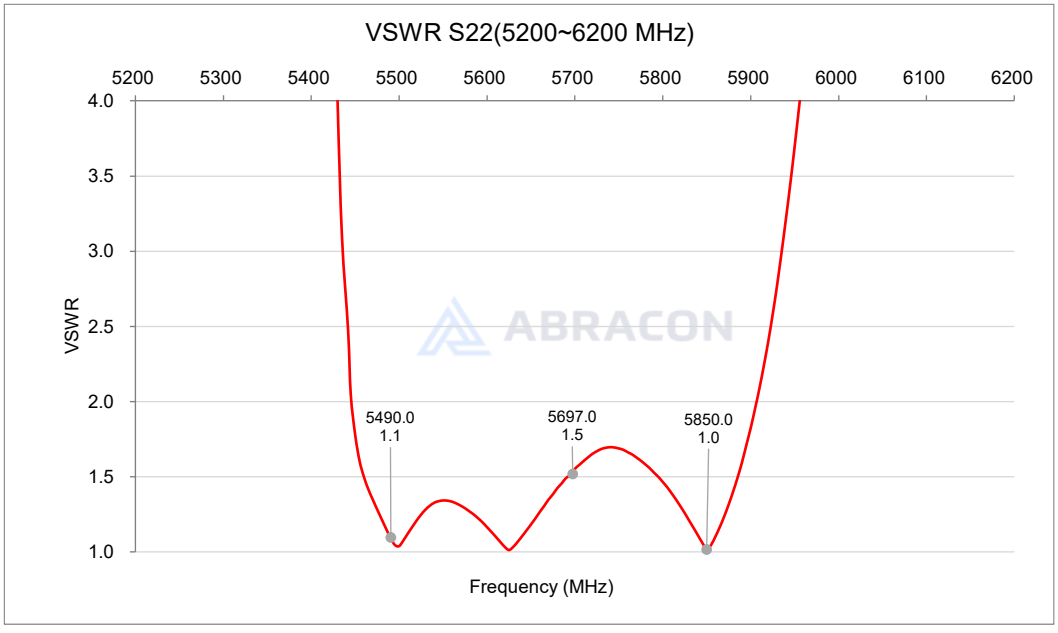
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8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

VSWR (S11 & S22)





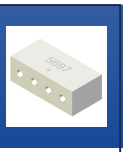
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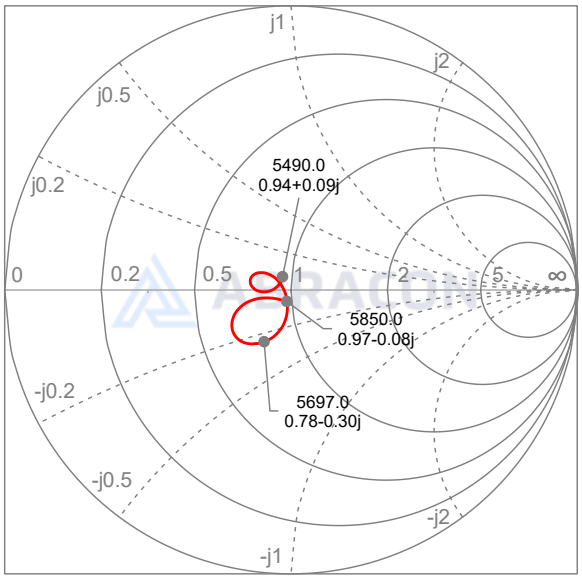
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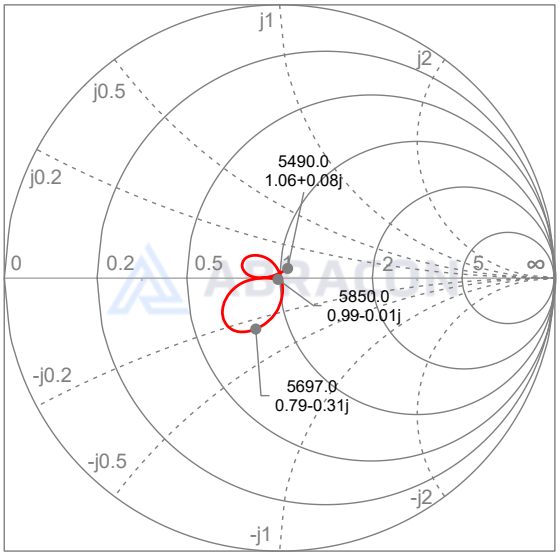
8.7 x 4.0 x 3.0 mm
RoHS Compliant
MSL Level = N/A

Smith Chart (S11 & S22)

Smith chart S11 (5490~5850MHz)



Smith chart S22 (5490~5850MHz)



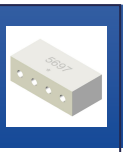
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RoHS Compliant
MSL Level = N/A

Reflow Profile [JEDEC J-STD-020]

Solder Paste: Ag3.0/Cu0.5/Sn

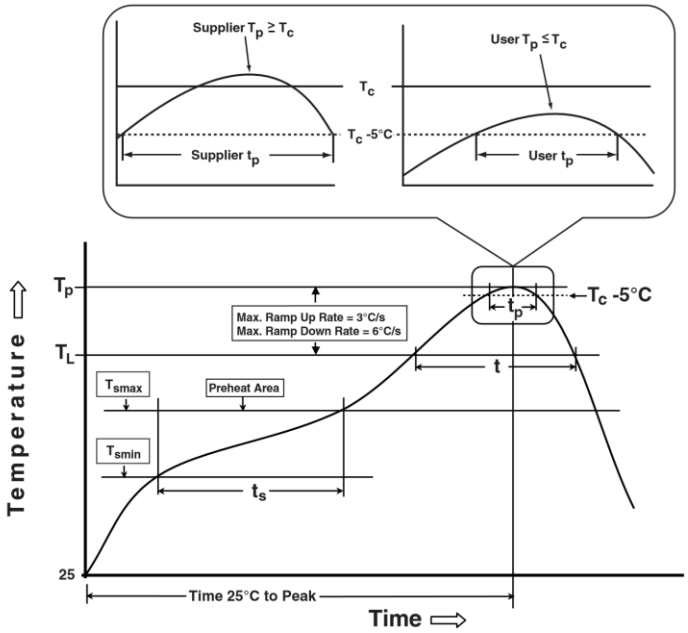


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)		
Package Thickness	**Volume mm³ <350**	**Volume mm³ ≧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 mm³ <350**	**Volume mm³ 350-2000**	**Volume mm³ >2000**
<1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	240°C	240°C	240°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	220°C
Time at Liquidous (T_L)	60 – 150 sec.	30 – 100 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.	5 sec.
Ramp-down rate (T_p to T_{smax})	6°C/sec. max	2-6°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.

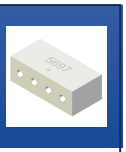
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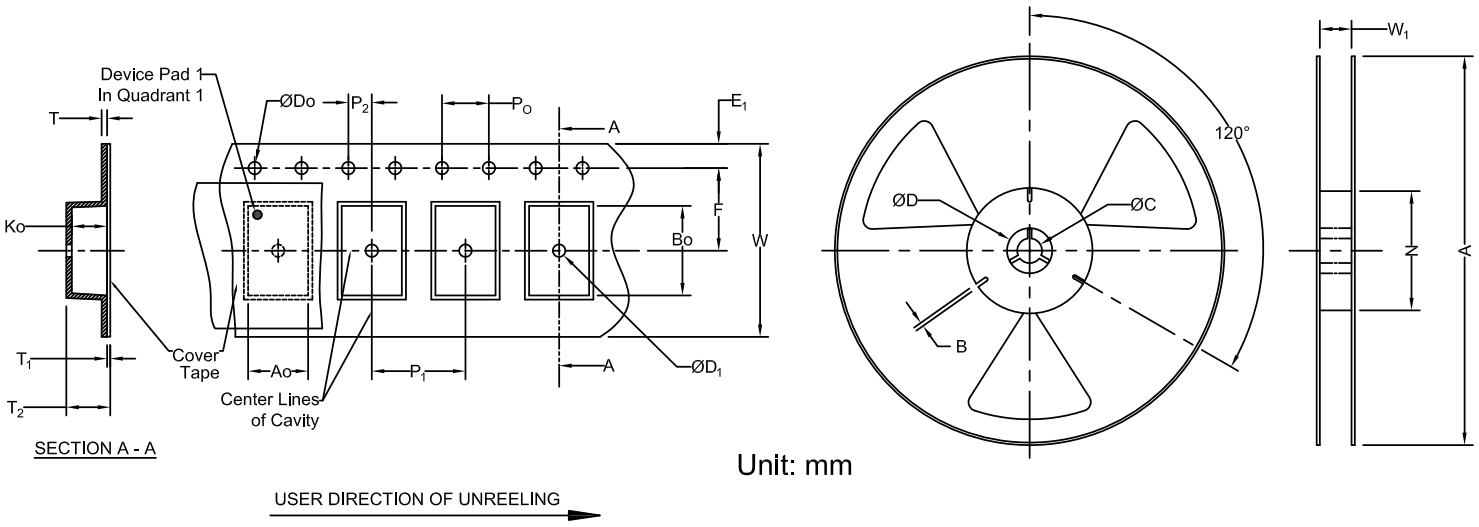
Packaging

Per plastic reel 2000 pieces of dielectric ceramic part

Per inner box 1 reel

Per package 10 inner boxes

Tape & Reel Dimension



Unit: mm

Carrier Tape Specifications (mm)										
E_1	P_0	F	P_1	P_2	D_0	W	A_0	B_0	K_0	Reel Qty
1.75 ± 0.1	4.0 ± 0.1	7.5 ± 0.1	8.0 ± 0.1	2.0 ± 0.1	1.5 ± 0.1	16.0 ± 0.2	4.6 ± 0.1	9.0 ± 0.2	3.3 ± 0.1	2,000

Reel Specifications (mm)				
A	B	W_1	N	C
330 ± 3	2.0 ± 0.5	22.4max	80min	13 ± 0.5

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