

ECN/PCN No.: R0398

For Manufacturer

Product Description:
SMD 2.45GHz Dielectric Band Pass Filter

Abracon Part Number / Part Series:
ADFC18-2450.00-A

☐ Documentation only

☐ Series

☒ ECN

☐ Part

☐ EOL

Number

Affected Revision:
IR

New Revision:
A

Application:

☐ Safety

☒ Non-Safety

Prior to Change:

SMD 2.45GHz Dielectric Band Pass Filter

ADFC18-2450.00-A-T



RoHS
Compliant



FEATURES:

- Small and low profile enables high density mounting
- Low insertion loss & attenuation
- Internally shielded for enhanced performance
- Excellent solderability

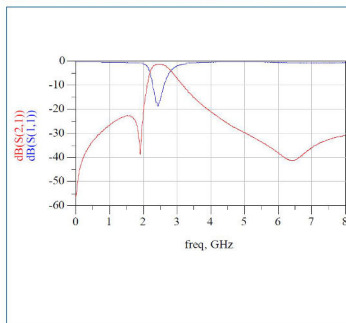
APPLICATIONS:

- Mobile communication system
- Bluetooth, Wireless LAN, WIFI, GPS, etc.

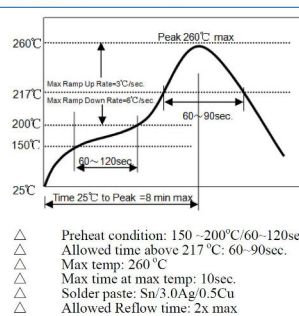
STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (f_0)		2450.00		MHz	
Passband width	2400.00		2500.00	MHz	
Insertion Loss (2400 ~ 2500MHz)		1.6	1.8	dB	@ +25 °C
				dB	@ -40 ~ +85 °C
Amplitude Ripple (2400 ~ 2500MHz)			0.5	dB	
V.S.W.R (2400 ~ 2500MHz)			1.5		
Relative Attenuation (Reference level: 0dB)	24			dB	800 ~ 960MHz
	20			dB	1710 ~ 1990MHz
	25			dB	4800 ~ 5000MHz
	25			dB	7200 ~ 7500MHz
Characteristic Impedance		50		Ω	
Operation Temperature Range	-40		+85	°C	
Storage Temperature Range	-10		+40	°C	RH 70% Max

CHARACTERISTIC CURVE:



REFLOW PROFILE:



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Revised: 12.03.12

After Change:

 ABRACON	ADFC18-2450.00-A SMD 2.45GHz Dielectric Band Pass Filter	 RoHS Compliant
Date of Issue: 8/13/2025	1.6 x 0.8 x 0.6 mm	 ESD Sensitive
Page (1) of (14)	Abracon Drawing # 453565	Revision #: A

Source Control Drawing

Part Description	SMD 2.45GHz Dielectric Band Pass Filter
Customer Part Number	
Abracon Part Number	ADFC18-2450.00-A

Customer Approval (Please return this copy as a certification of your approval)	
Approved by	
Approval Date	

Ordering Information

Part Number	Description
ADFC18-2450.00-A	SMD 2.45GHz Dielectric Band Pass Filter on Cut Tape
ADFC18-2450.00-A-T	SMD 2.45GHz Dielectric Band Pass Filter on Tap & Reel

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

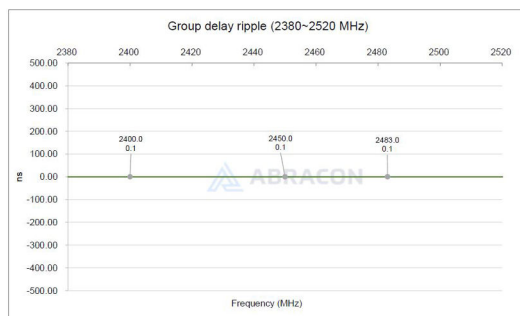
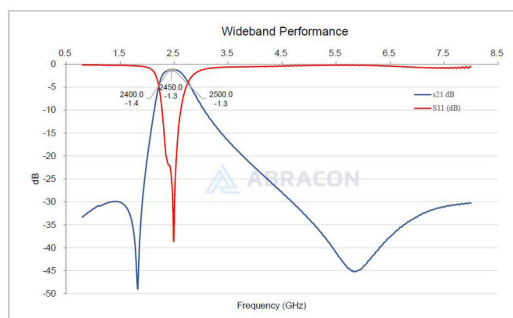
ADFC18-2450.00-A

Request Samples

Check Inventory

1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

Frequency Characteristics



Updated Part Number , performance Plot & Ordering info

Cause/Reason for Change: Updated Part Number with Series name (ADFC18-2450.00-A-T -> ADFC18-2450.00-A)

Change Plan

Effective Date:

08/13/2025

Additional Remarks:

Change Declaration:

Issued Date: 08/13/2025	Issued By: Allan	Issued Department: Engineering
Approval: <i>Saravanan Subramanian</i> Engineering Manager	Approval: <i>Reuben Quintanilla</i> Quality Director	Approval: <i>Ying Huang</i> Purchasing Director
For Abracon EOL only		
Last Time Buy (if applicable):	Alternate Part Number / Part Series:	
Additional Approval:	Additional Approval:	Additional Approval:
Customer Approval (If Applicable)		
Qualification Status: ☐ Approved ☐ Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:		Customer Project:
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		

SMD 2.45GHz Dielectric Band Pass Filter



ADFC18-2450.00-A

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1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

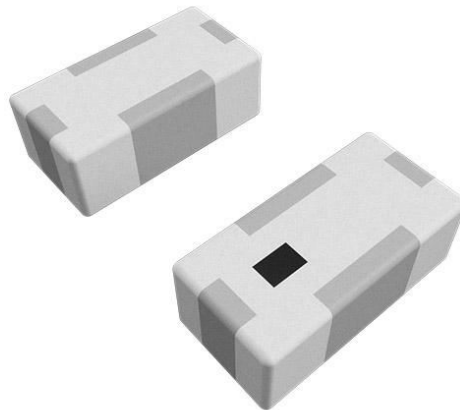
Features

- Bandpass Ceramic Filter with 100 MHz Bandwidth
- Compact in Size 1.6 x 0.8 x 0.6 mm
- Low Insertion Loss: <1.4 dB
- Single-Ended Input and Output
- Excellent Selectivity with High Out-of-Band Rejection
- RoHS Compliant

Applications

- WiFi/WLAN Coverage
 - WiFi 4/5 (802.11b/g/n/ac)
- Bluetooth®/ ZigBee® / Thread/ Matter
- 2.4GHz TWS Audio
- IoT Wearable Devices
- Smart Home Automation

Product Image



SMD 2.45GHz Dielectric Band Pass Filter



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1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (f_0)	-	2450	-	MHz	
Passband	2400	-	2500	MHz	
Insertion Loss	-	1.3	1.4	dB	@25°C
	-	-	1.8	dB	@-40°C ~ +85°C
Amplitude Ripple	-	0.42	0.5	dB	
VSWR	-	-	1.5		
Group Delay	-	0.1	-	ns	
Group Delay Ripple	-	0.024	-		
Relative Attenuation (Reference level: 0dB)	31.9	32.5	-	dB	800 ~ 960 MHz
	23.4	35.5	-		1710 ~ 1970 MHz
	31.5	32.6	-		4800 ~ 5000 MHz
	31.1	31.53	-		7200 ~ 7500 MHz
Source Impedance ⁽¹⁾ (single ended)	-	50	-	Ω	
Load Impedance ⁽¹⁾ (single ended)	-	50	-	Ω	
Power Capacity		3		W	

Notes: (1) Without Matching Network (Ref. Testing Environment Circuit as shown below)

Mechanical Specification

Parameters	Specifications
Dimension	1.6 x 0.8 x 0.6 mm
Mounting Type	SMD Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-40°C ~ +85°C
Storage Temperature Range	-10°C ~ +40°C
RoHS Complaint	Yes
MSL Level	1



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1.6 x 0.8 x 0.6 mm

RoHS Compliant

MSL Level = 1

Ordering Information

Part Number	Description
ADFC18-2450.00-A	SMD 2.45GHz Dielectric Band Pass Filter on Cut Tape
ADFC18-2450.00-A-T	SMD 2.45GHz Dielectric Band Pass Filter on Tap & Reel

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

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ADFC18-2450.00-A

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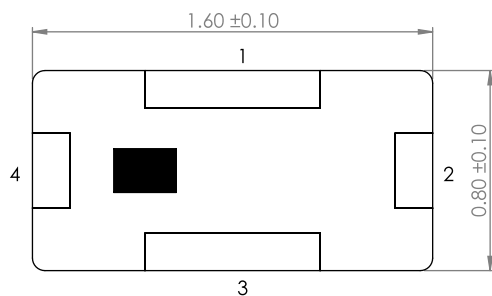


Check Inventory

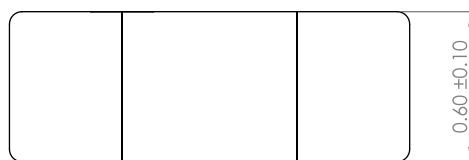


1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

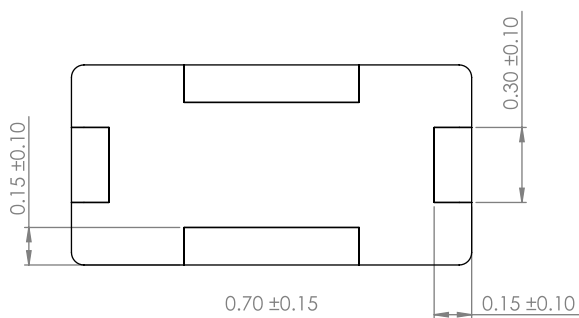
Product Dimensions



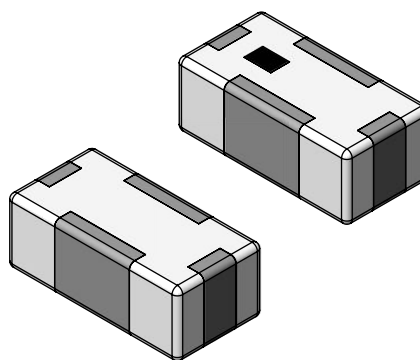
TOP VIEW



FRONT VIEW



BOTTOM VIEW



Pin#	DESCRIPTION
1,3	GROUND
4	INPUT/OUTPUT
2	OUTPUT/INPUT

Unit: mm

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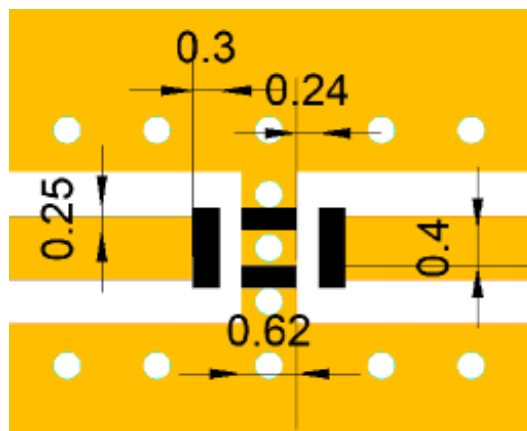
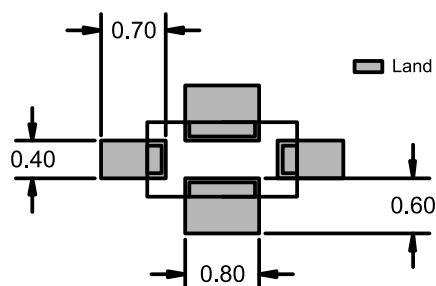


1.6 x 0.8 x 0.6 mm

RoHS Compliant

MSL Level = 1

Recommended Land Pattern



 Solder Resist

 Land

 Through hole
Ø=0.3

Unit : mm

Please note: The line width should be designed to achieve a 50-ohm characteristic impedance, depending on the PCB material and thickness. For technical assistance, please contact [Abracon online support](#) through our online support platform.

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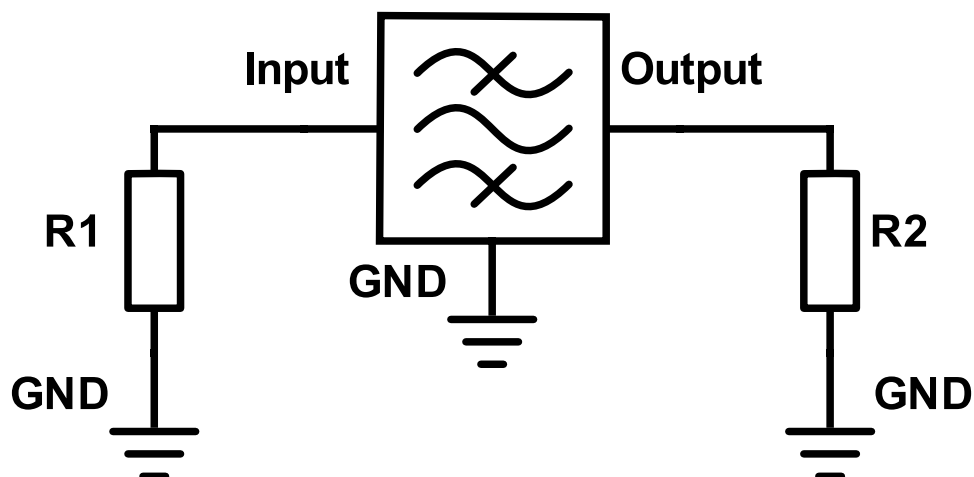


1.6 x 0.8 x 0.6 mm

RoHS Compliant

MSL Level = 1

Measurement Circuit



Port	Matching Component
Input	R1: 50Ω
Output	R2: 50Ω

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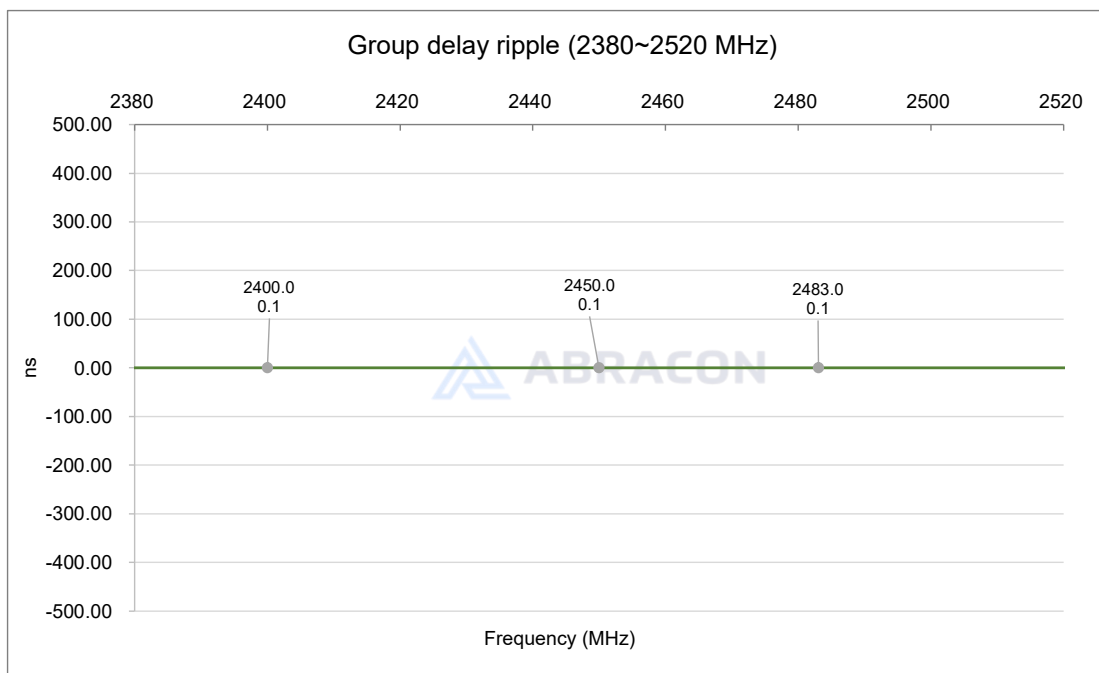
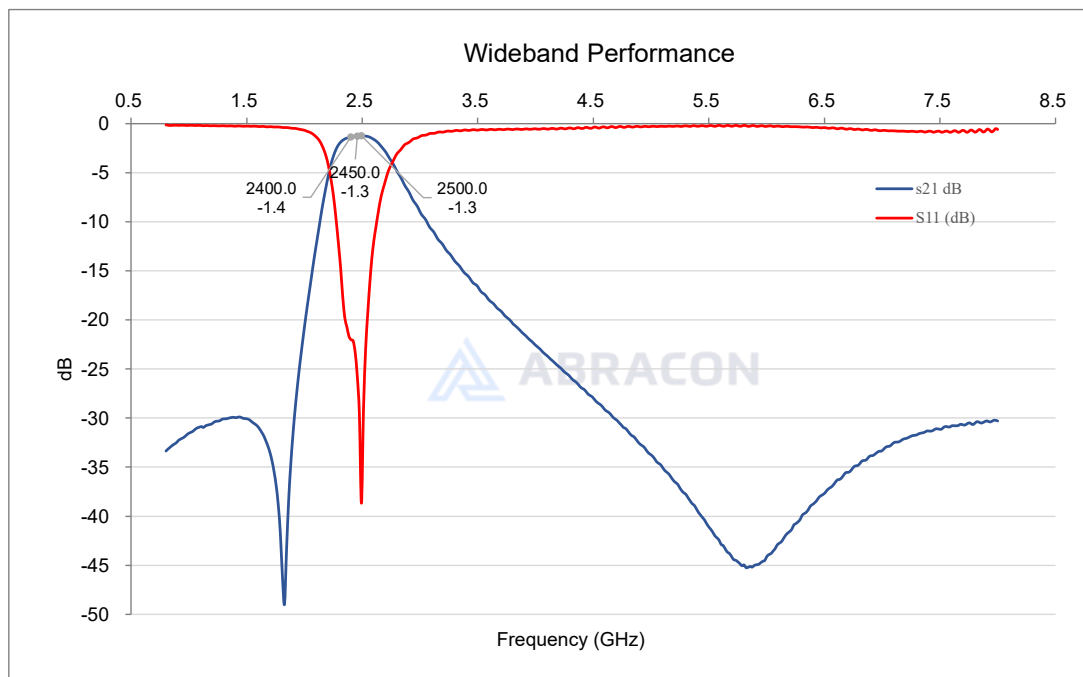


Check Inventory



1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

Frequency Characteristics



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Check Inventory



1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

Reflow Profile [JEDEC J-STD-020]

Solder paste: Sn/3.0Ag/0.5Cu

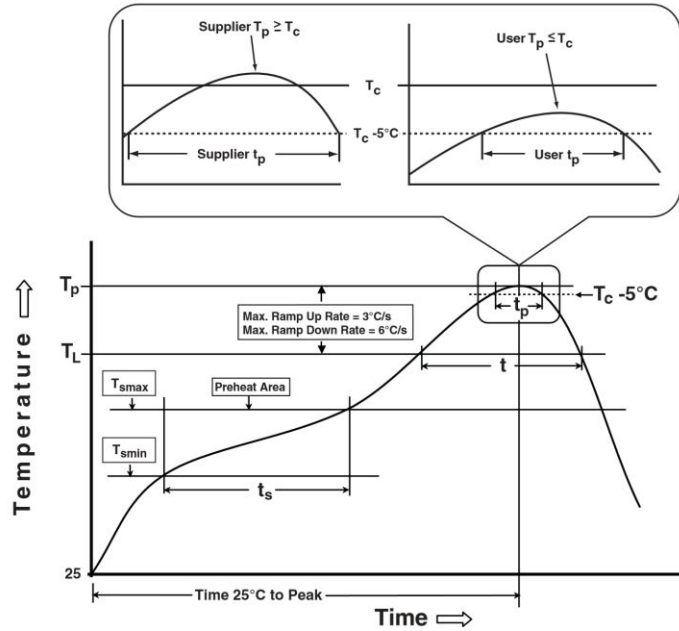


Table 1

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	200°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	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.	10 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.



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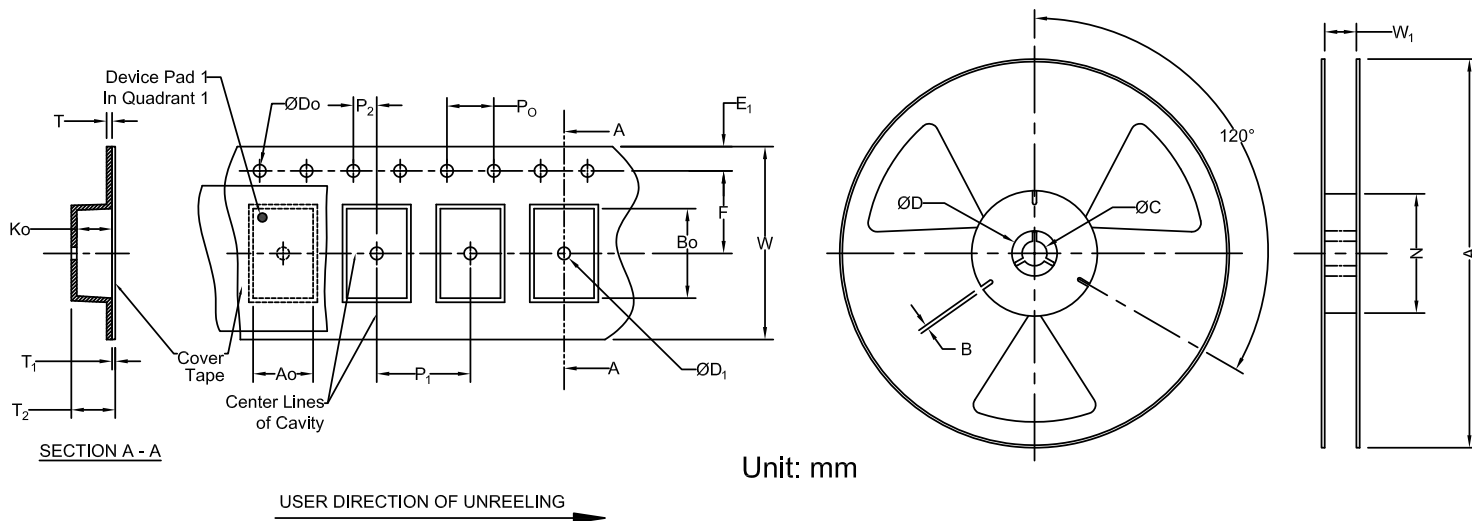
Check Inventory



1.6 x 0.8 x 0.6 mm
RoHS Compliant
MSL Level = 1

Packaging

Tape & Reel Dimension: 1608(0603)



Carrier Tape Specifications (mm)

E1	D0	P0	P2	F	P1	W	A0	B0	T ₂	Reel Qty
1.75 ± 0.1	1.5 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	3.5 ± 0.05	2.0 ± 0.05	8.0 ± 0.3	1.0 ± 0.03	1.8 ± 0.03	0.75 Max	4,000

Reel Specifications (mm)

A	W ₁	N	C
178 ± 2.0	10.0 ± 1.5	58 ± 2.0	13.5 ± 0.2

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Brand	Affected PN	Discontinued/EOL PN	Added PN
Abracon	ADFC18-2450.00-A-T		

Series	ECO#	Datasheet Link
ADFC18-2450.00-A	R0398	https://abracon.com/Filters/Dielectric/ADFC18-2450.00-A-T.pdf

ECN Notification Link

https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0398_ADFC18-2450.00-A.pdf