

ECN/PCN No.: R0397

For Manufacturer

Product Description: SMD 2.45GHz Dielectric Band Pass Filter	Abracon Part Number / Part Series: ADFC15-2450.00-A	☐ Documentation only ☒ ECN ☐ EOL	☐ Series ☐ Part Number
Affected Revision: A	New Revision: B	Application:	☐ Safety ☒ Non-Safety

Prior to Change:

 ABRACON	ADFC15-2450.00-A-T SMD 2.45GHz Dielectric Band Pass Filter	 RoHS Compliant
Date of Issue: 2/21/2024	1.0 x 0.5 x 0.38 mm	 ESD Sensitive
Page (1) of (13)	Abracon Drawing # 453564	Revision #: A

Source Control Drawing

Part Description	SMD 2.45GHz Dielectric Band Pass Filter
Customer Part Number	
Abracon Part Number	ADFC15-2450.00-A-T

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

Approved by	
Approval Date	

Ordering Information

Part Number	Description
ADFC15-2450.00-A-T	SMD 2.45GHz Dielectric Band Pass Filter
ADFC15-2450.00-A-T-EVB	SMD 2.45GHz Dielectric Band Pass Filter EVB

After Change:

 ABRACON	ADFC15-2450.00-A SMD 2.45GHz Dielectric Band Pass Filter	 RoHS Compliant
Date of Issue: 8/13/2025	1.0 x 0.5 x 0.38 mm	 ESD Sensitive
Page (1) of (14)	Abracon Drawing # 453564	Revision #: B

Source Control Drawing

Part Description	SMD 2.45GHz Dielectric Band Pass Filter
Customer Part Number	
Abracon Part Number	ADFC15-2450.00-A

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

Approved by	
Approval Date	

Ordering Information

Part Number	Description
ADFC15-2450.00-A	SMD 2.45GHz Dielectric Band Pass Filter on Cut Tape
ADFC15-2450.00-A-T	SMD 2.45GHz Dielectric Band Pass Filter on Tap & Reel
ADFC15-2450.00-A-T-EVB	SMD 2.45GHz Dielectric Band Pass Filter EVB

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

Updated Part Number & Ordering info		
Cause/Reason for Change: Updated Part Number with Series name (ADFC15-2450.00-A-T -> ADFC15-2450.00-A)		
Change Plan		
Effective Date: 08/13/2025	Additional Remarks:	
Change Declaration:		
Issued Date: 08/13/2025	Issued By: Allan	Issued Department: Engineering
Approval: Saravanan Subramanian Engineering Manager	Approval: Reuben Quintanilla Quality Director	Approval: Ying Huang 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



ADFC15-2450.00-A

Request Samples



Check Inventory



1.0 x 0.5 x 0.38 mm
RoHS Compliant
MSL LEVEL 1

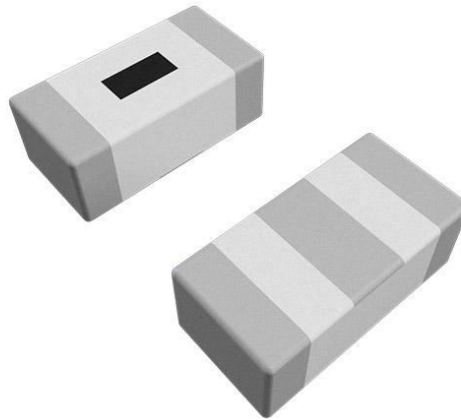
Features

- Bandpass Ceramic Filter with 100MHz Bandwidth
- Compact in Size 1.0 x 0.5 x 0.38 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



ADFC15-2450.00-A

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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
	-	-	1.7	dB	@-40°C ~ +85°C
Amplitude Ripple	-	0.47	0.5	dB	
VSWR	-	-	1.5		
Group Delay	-	0.47	-	ns	
Group Delay Ripple	-	0.01	-		
Relative Attenuation (Reference level: 0dB)	34.0	34.4	-	dB	800 ~ 960 MHz
	8.0	12.6	-		1710 ~ 1970 MHz
	40.3	43.9	-		4800 ~ 5000 MHz
	37.3	39.9	-		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	1.0 x 0.5 x 0.38 mm
Mounting Type	Surface 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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ADFC15-2450.00-A

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MSL LEVEL 1

Ordering Information

Part Number	Description
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ADFC15-2450.00-A-T	SMD 2.45GHz Dielectric Band Pass Filter on Tap & Reel
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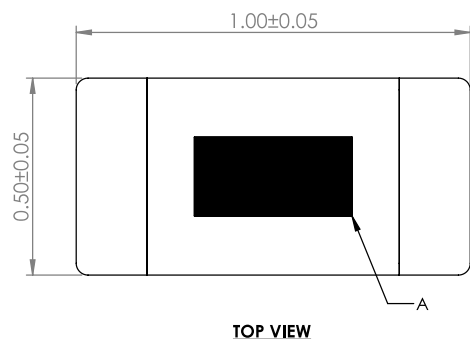
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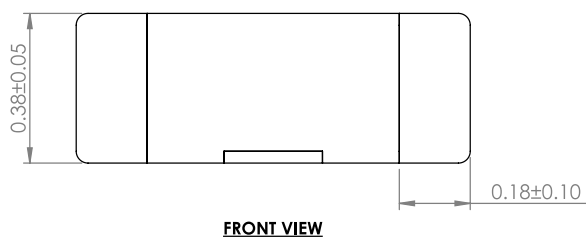
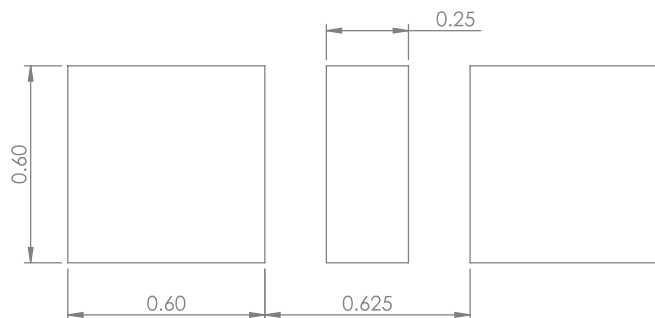
1.0 x 0.5 x 0.38 mm
RoHS Compliant
MSL LEVEL 1

Product Dimensions

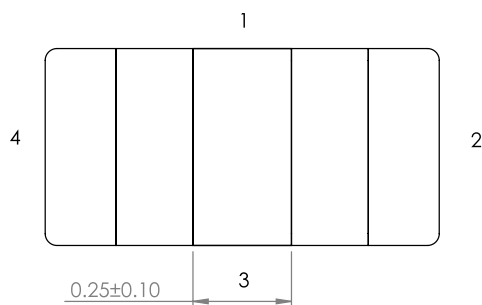
RECOMMENDED LAND PATTERN



TOP VIEW

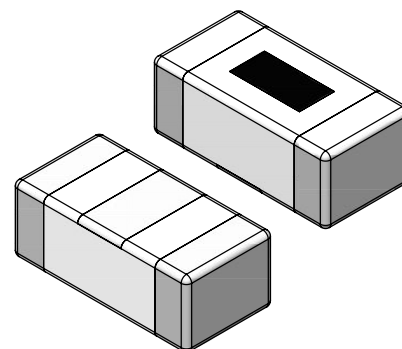


FRONT VIEW



BOTTOM VIEW

Pin #	Function
1	GND
2	Output/Input
3	GND
4	Input/Output
A	MARK



Unit: mm

SMD 2.45GHz Dielectric Band Pass Filter



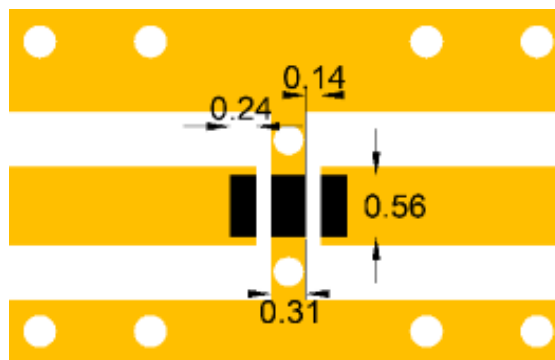
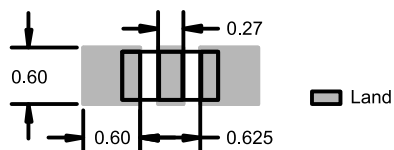
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RoHS Compliant
MSL LEVEL 1

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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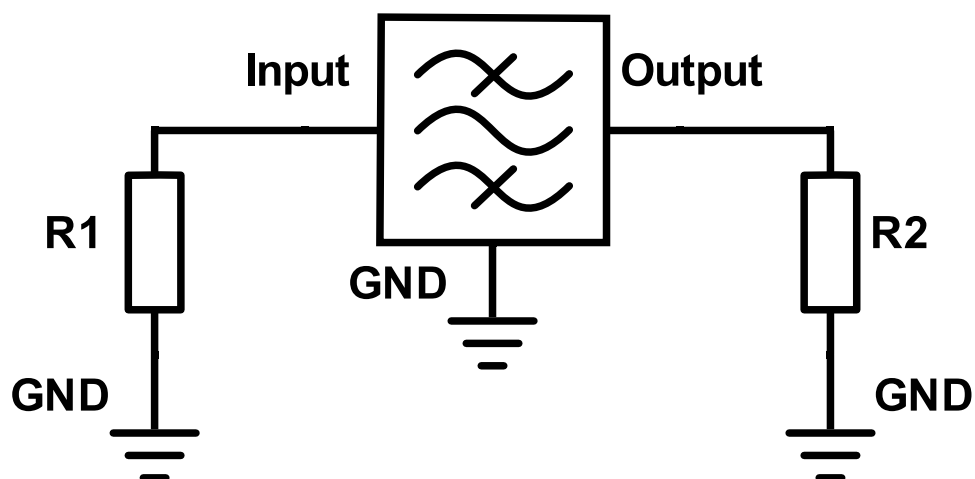


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Measurement Circuit



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

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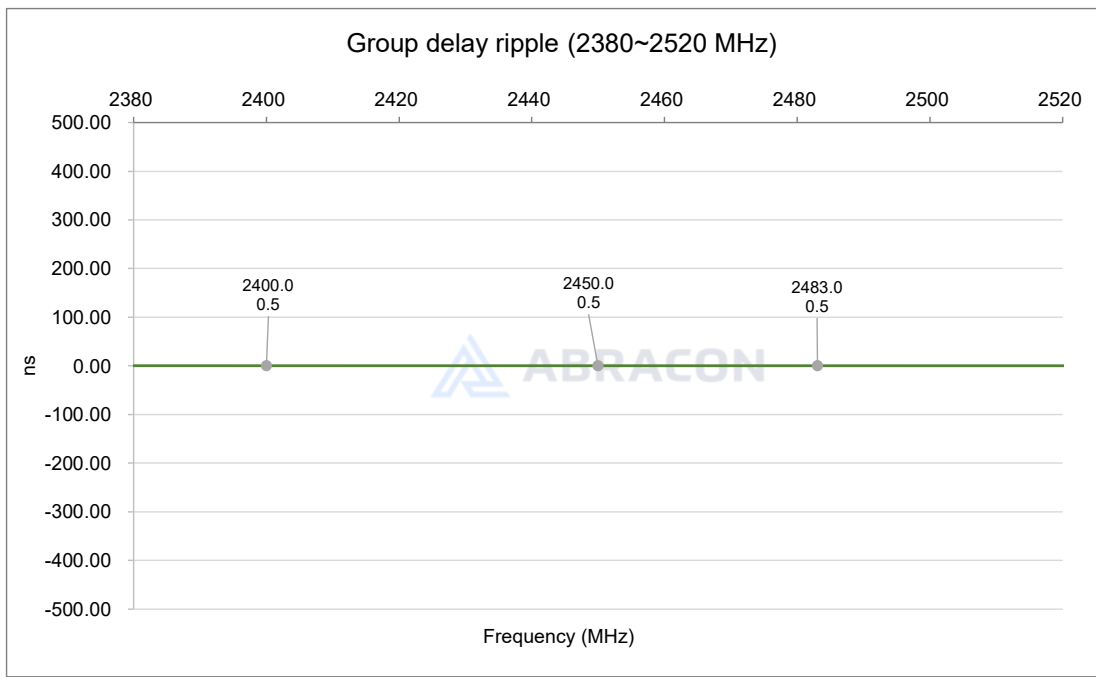
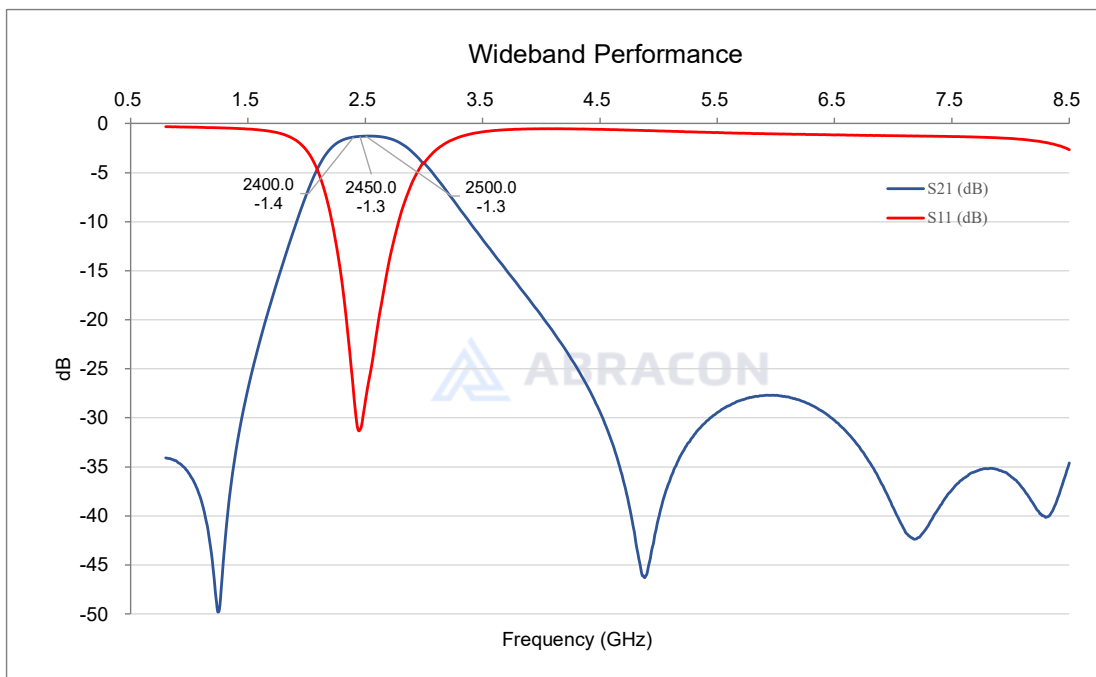


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Frequency Characteristics



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Reflow Profile [JEDEC J-STD-020]

Solder paste: Sn/3.0Ag/0.5Cu

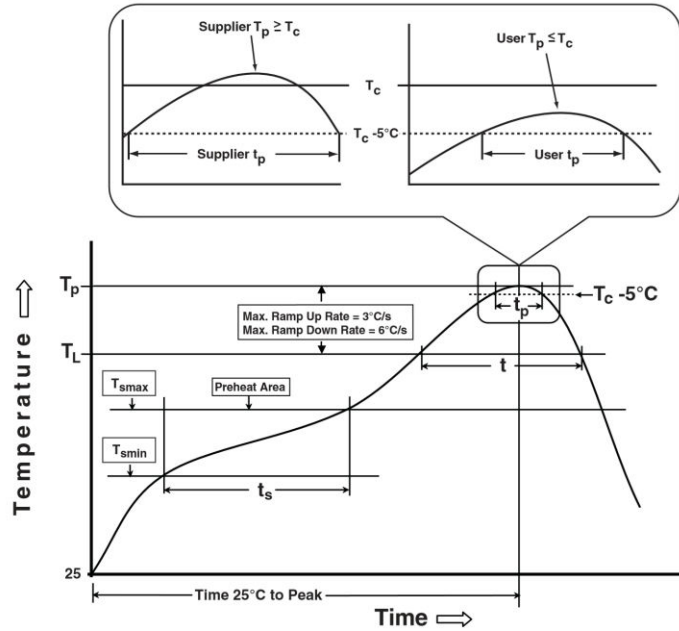


Table 1

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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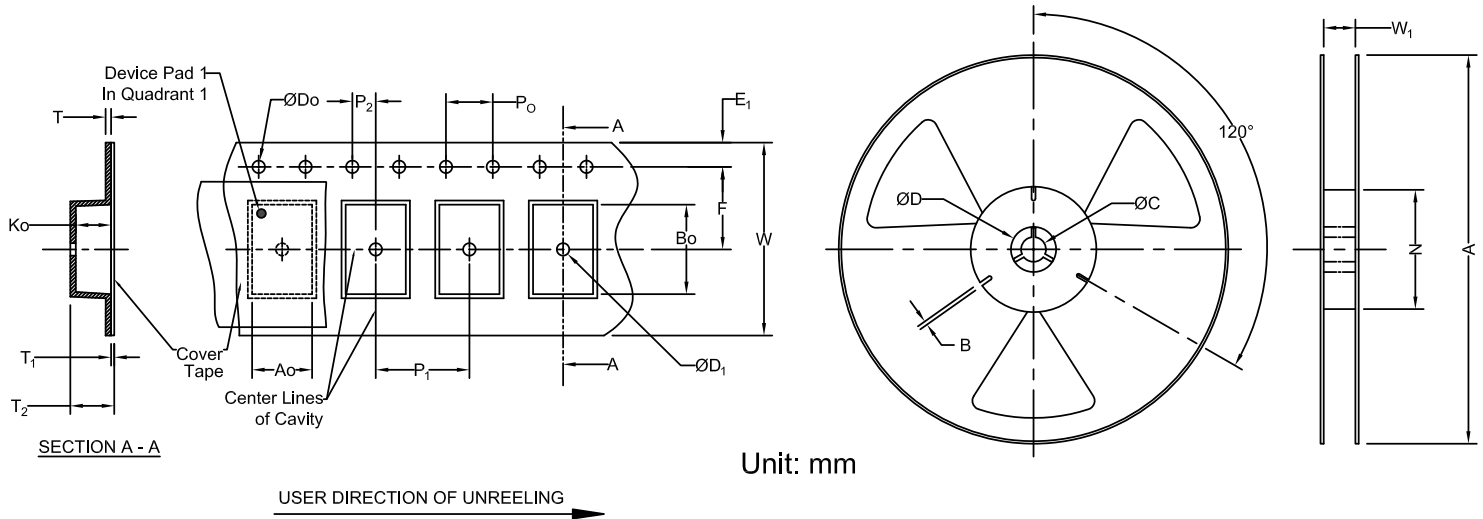
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RoHS Compliant
MSL LEVEL 1

Packaging

Tape & Reel Dimension



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	0.62 ± 0.03	1.12 ± 0.03	0.45 Max	10,000

Reel Specifications (mm)

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

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf ('COTS'), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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Brand	Affected PN	Discontinued/EOL PN	Added PN	Series	ECO#	Datasheet Link	ECN Notification Link
Abracon	ADFC15-2450.00-A-T			ADFC15-2450.00-A	R0397	https://abracon.com/Filters/Dielectric/ADFC15-2450-00-A-T.pdf	https://abracon.com/downloads/ECN-PCN/ECN-PCN-Notification_ECOR0397_ADFC15-2450.00-A.pdf