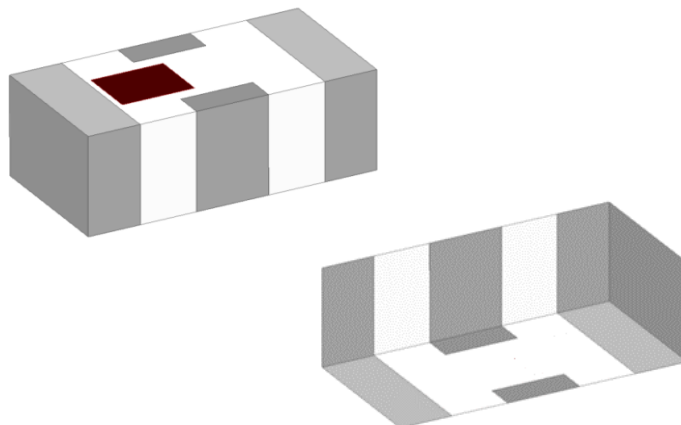


2.4 GHz Filter, Impedance-matched Filter for Nordic Semiconductor Chipsets nRF52840-QIAA, nRF52833-QIAA, nRF52833-QDAA

- 2400 - 2500 MHz passband
- Designed for Nordic Semiconductor chipset:
 - nRF52840-QIAA
 - nRF52833-QIAA
 - nRF52833-QDAA
- For 2.4GHz applications such as WiFi, Bluetooth, Zigbee, etc.
- EIA 0402 SMD (1.0mm x 0.5mm x 0.4mm)



General Specifications¹

		Impedance match for:	
Impedance, Transceiver Side (Ω)	2400 - 2500 MHz	nRF52840-QIAA nRF52833-QIAA nRF52833-QDAA	
Impedance, Antenna Side (Ω)	2400 - 2500 MHz	50	
Insertion Loss (dB)	2400 - 2500 MHz	0.4 Typ.	0.8 Max.
Return Loss (dB)	2400 - 2500 MHz	10 Min.	
Attenuation (dB)	4800 - 5000 MHz	23 Min.	
	7200 - 7500 MHz	31 Min.	
	9600 - 10000 MHz	30 Min.	
	12000 - 12500 MHz	25 Min.	

Maximum Ratings

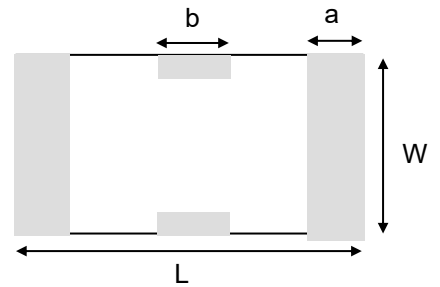
Power Capacity (W)	3 Max. (CW)
Operating Temperature ($^{\circ}\text{C}$)	-40 to +85
Recommended Storage Conditions Post-installation ($^{\circ}\text{C}$)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 $^{\circ}\text{C}$ 18 Months Max.

¹ Typical value represents average measurement at 25 $^{\circ}\text{C}$. Min./Max. values represent measurements over specified operating temperature.

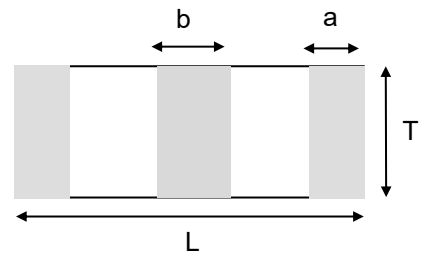
Mechanical Dimensions

	Inches			Millimeters		
L	0.039	±	0.002	1.00	±	0.05
W	0.020	±	0.002	0.50	±	0.05
T	0.016		Max.	0.40		Max.
a	0.007	±	0.004	0.18	±	0.1
b	0.010	±	0.004	0.25	±	0.1

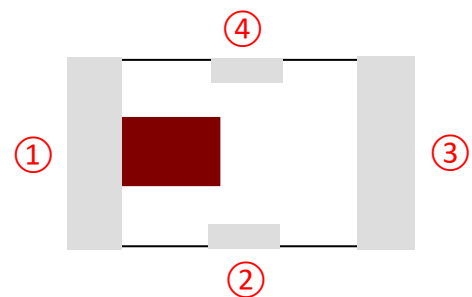
Bottom view



Side view



Top view



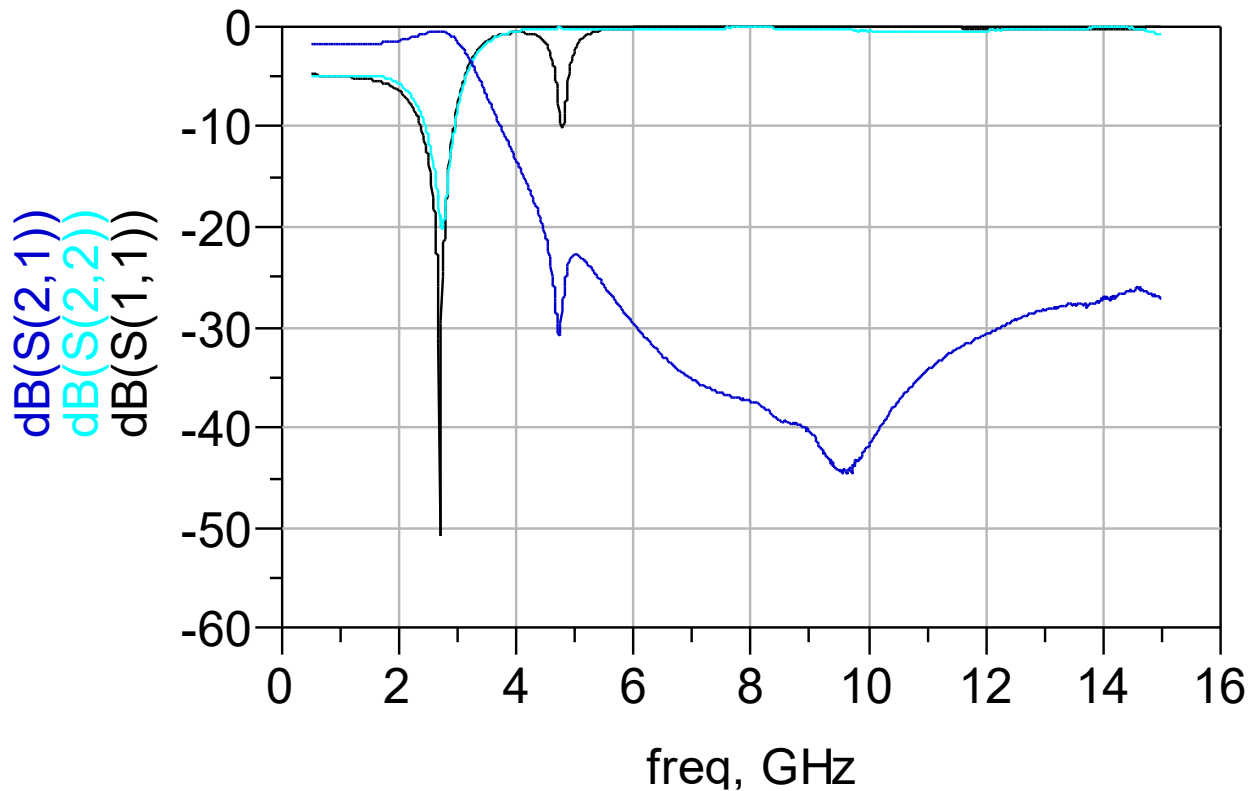
Terminal Configuration²

Pin Number	Function
1	IN (To RFIC)
2	GND
3	OUT (To Antenna)
4	GND

² The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile.

RF Measurement (T = 25°C)

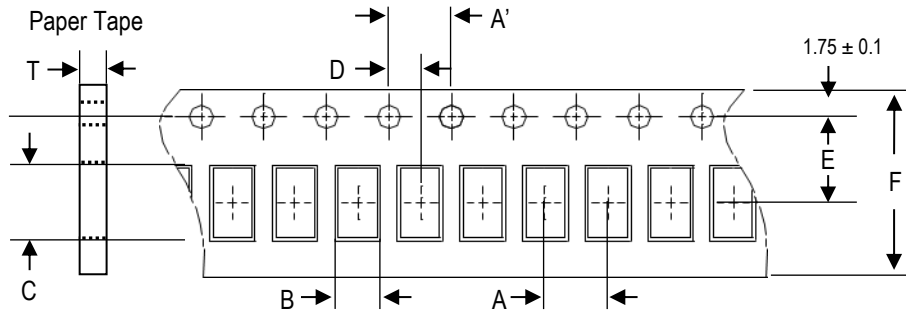
Insertion Loss, Return Loss, Attenuation



S-parameter and layout file available upon request. Please contact us at <https://www.johansontechnology.com/ask-a-question>.

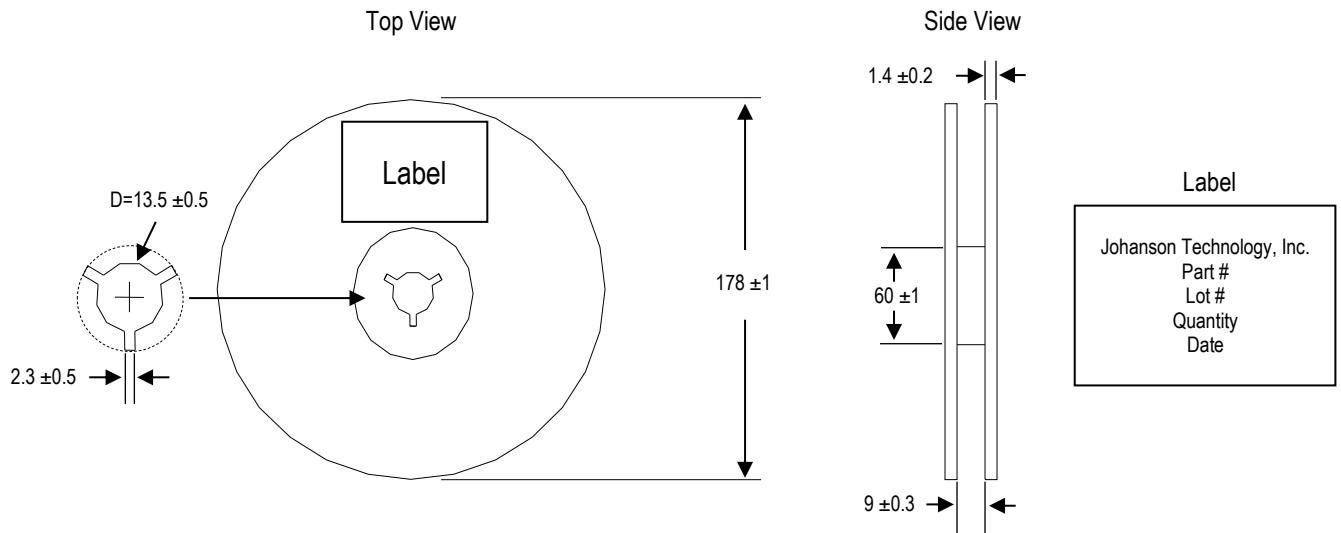
Tape and Reel Specification (Units in mm)

Tape Dimensions

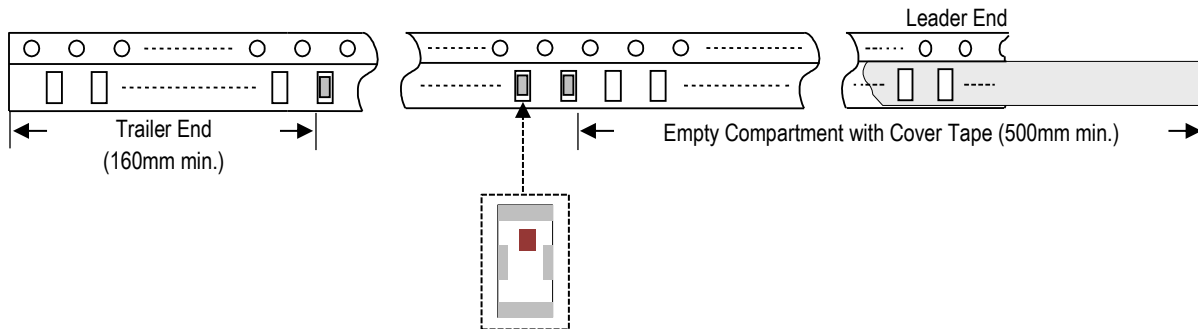


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
2.0 ± 0.05	4.0 ± 0.1	0.62 ± 0.03	1.12 ± 0.03	2.0 ± 0.05	3.5 ± 0.05	8.0 ± 0.1	0.45 ± 0.03	10,000 pcs.	Paper

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Number

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	2450FM07A0037001B	Nickel Tin
T & R (7" Reel Paper Tape)	2450FM07A0037001T (Qty: 10,000 pcs/reel)	

Important Links

[2450FM07A0037001T Product Page](#)

[More Nordic Semiconductor Reference Designs](#)

[2.4GHz Antennas](#)

[Antenna Tuning, Optimization, and Validation Services](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

[Recommended Storage Condition and Max Shelf Life](#)

[RoHS Compliance](#)

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