



## SAW FILTER For Automotive

### FF-32N

- Frequency range : 300 MHz to 500 MHz
- Thickness : 0.98 mm Typ.
- Applications : Remote keyless entry, RF
- Narrow band for SRD Front-end filters.
- Low-loss, Narrow Pass bandwidth, High stability by using crystal substrate.



Product number (please contact us)  
FF-32N : Q51FF32N0xxx00



Actual size

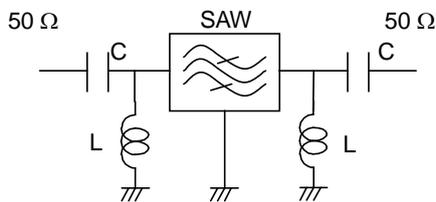


### Specifications (characteristics)

Item	Symbol	Specifications		Conditions / Remarks
Nominal frequency range	f_nom	300 MHz to 500 MHz	426 MHz, 429 MHz band*	
Storage temperature	T_stg	-55 °C to +125 °C	-55 °C to +125 °C	Storage as single product.
Operating temperature	T_use	-40 °C to +85 °C	-10 °C to +60 °C	
Insertion Loss	IL	3.5 dB Max.	3.5 dB Max.	
Pass bandwidth	P_Bw	f_nom ±200 kHz Min.	f_nom ±300 kHz Min.	Reference to minimum loss (3 dB down)
Guaranteed attenuation	G_Att	f_nom -21.4 MHz : 40 dBMin. f_nom -10.7 MHz : 35 dBMin.	f_nom -21.4 MHz : 40 dB Min. f_nom -10.7 MHz : 35 dB Min.	
Turnover temperature	Ti	+25 °C ±15 °C	+25 °C ±15 °C	
Temperature coefficient	B	-(3.4±0.8) × 10 <sup>-8</sup> / °C <sup>2</sup>	-(3.4±0.8) × 10 <sup>-8</sup> / °C <sup>2</sup>	
Terminal impedance	Zt	370 Ω Typ.	-	Ex: 315 MHz
		160 Ω Typ.	-	Ex: 433.92 MHz
		-	220 Ω Typ.	Ex: 429.45 MHz

Product Name FF-32N 312.240000MHz  
(Standard form) ① ②  
①Model ②Frequency

### Test fixture



#### Remarks

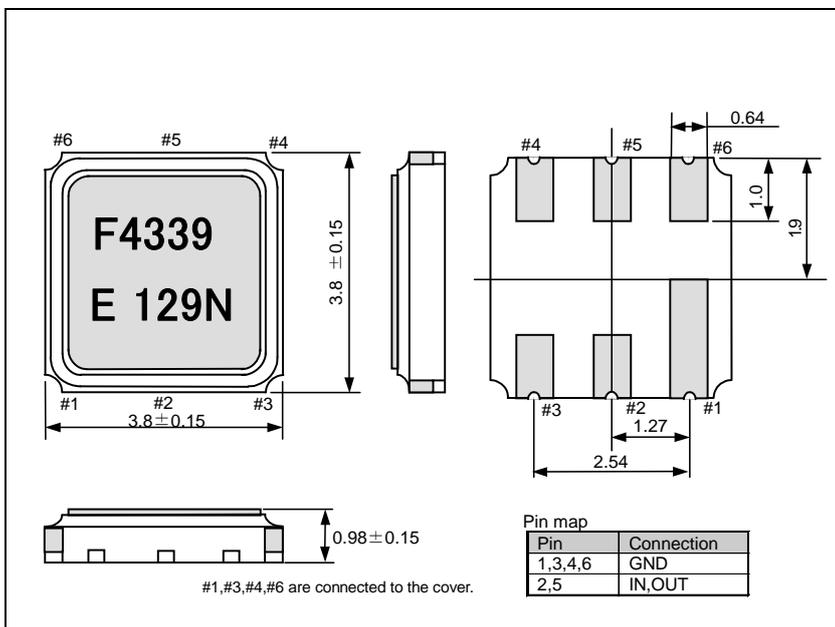
Ex: f\_nom =315 MHz  
Series Capacitance = 4 pF  
Parallel Inductance =33 nH

Ex: f\_nom =429.45 MHz  
Series Capacitance =4 pF  
Parallel Inductance =18 nH

Ex: f\_nom =433.92 MHz  
Series Capacitance =5 pF  
Parallel Inductance =18 nH

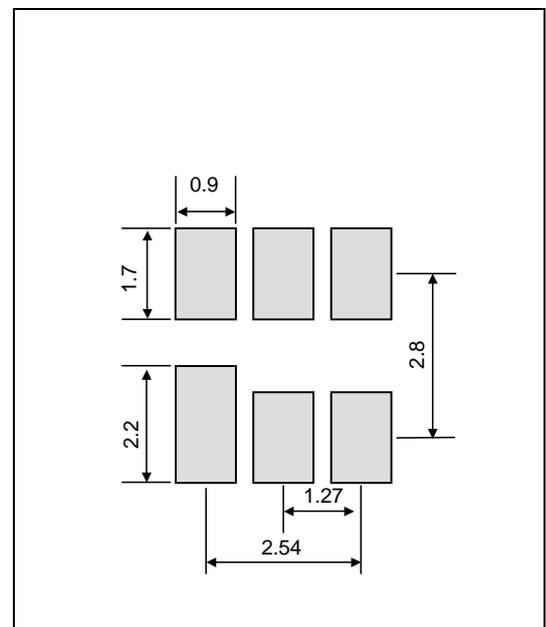
### External dimension

(Unit:mm)



### Footprint (Recommended)

(Unit:mm)



## PROMOTION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONFORMING TO INTERNATIONAL STANDARDS

At Seiko Epson, all environmental initiatives operate under the Plan-Do-Check-Action (PDCA) cycle designed to achieve continuous improvements. The environmental management system (EMS) operates under the ISO 14001 environmental management standard.

All of our major manufacturing and non-manufacturing sites, in Japan and overseas, completed the acquisition of ISO 14001 certification.

ISO 14000 is an international standard for environmental management that was established by the International Standards Organization in 1996 against the background of growing concern regarding global warming, destruction of the ozone layer, and global deforestation.

## WORKING FOR HIGH QUALITY

In order provide high quality and reliable products and services than meet customer needs,

Seiko Epson made early efforts towards obtaining ISO9000 series certification and has acquired ISO9001 for all business establishments in Japan and abroad. We have also acquired ISO/TS 16949 certification that is requested strongly by major automotive manufacturers as standard.

ISO/TS16949 is the international standard that added the sector-specific supplemental requirements for automotive industry based on ISO9001.

### ► Explanation of the mark that are using it for the catalog

	► Pb free.
	► Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)
	► Designed for automotive applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.
	► Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc.)

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