



## Saw Microwave Components - Filter / Resonator

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Notice: Specification Changed or Version Updated will be posted at irregular intervals.  
All Updated and Final Specifications, Please Confirm with TOKEN ELECTRONICS REPRESENTATIVES.



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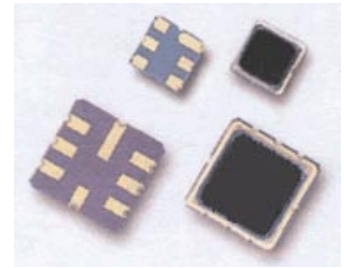


# Saw Filters

## Cell Phone - Saw Filters

### ▶ Saw Filter Features

- Low Loss RF filter for mobile telephone, receive path
- Usable passband: 35MHz
- No matching network required for operation at 50Ω
- Small Sizes

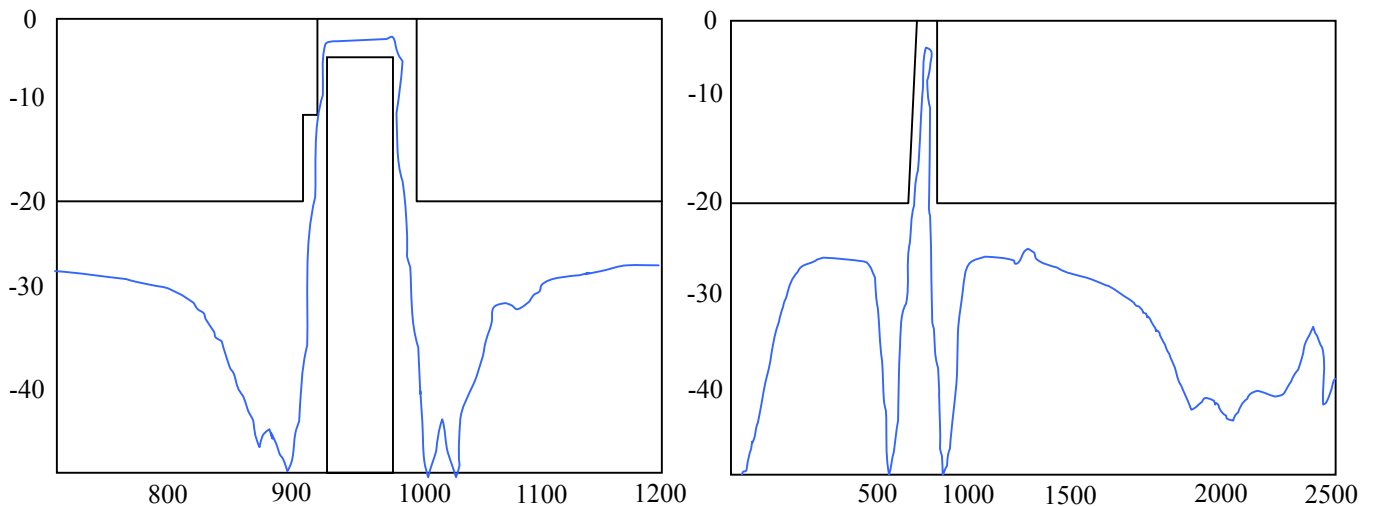


### ▶ Saw Filter Typical Specification

System		Center Frequency (MHz)	Typical Insertion Loss (dB)	Bandwidth (MHz)	Package	Operating Temperature (°C)	Storage Temperature (°C)
CDMA/AMPS	Tx	836.5	2.2	25	SMD3*3	-25 ~ +75	-40 ~ +85
	Rx	881.5	2.4				
GSM	Tx	902.5	2.4	25	SMD3*3	-25 ~ +75	-40 ~ +85
	Rx	947.5	2.4				
EGSM	Rx	942.5	3.5	35	SMD3*3	-25 ~ +75	-40 ~ +85
GPS	Rx	1575.42	3.0	2.4	SMD3*3	-25 ~ +75	-40 ~ +85
DCS	Tx	1747.5	3.5	75	SMD3*3	-25 ~ +75	-40 ~ +85
	Rx	1842.5	3.0				
Wireless Communication	Rx	915	2.4	25	SMD3*3	-25 ~ +75	-40 ~ +85

### ▶ Saw Filter FL Series [SMD 3×3]

System		Center Freq.(MHz)	B/W (MHz)	Part Number	Package	MarkingCode
CDMA/AMPS	Tx	836.5	25	FLS836D50-T3	SMD 3x3	T3
	Rx	881.5	25	FLS881D50-R3	SMD 3x3	R3
GSM	Tx	902.5	25	FLS902D50-T1	SMD 3x3	T1
	Rx	947.5	25	FLS947D50-R1	SMD 3x3	R1
EGSM	Rx	942.5	35	FLS942D50-R2	SMD 3x3	R2
GPS	Rx	1575.42	2.4	FLS1575D4-R6	SMD 3x3	R6
DCS	Tx	1747.5	75	FLS1747D5-T5	SMD 3x3	T5
	Rx	1842.5	75	FLS1842D5-R5	SMD 3x3	R5





# Saw Filters

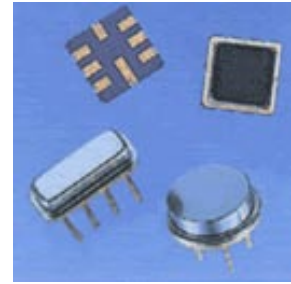
## Narrow Band Saw Filters - FM Series

### ▶ Saw Filter - Narrow Band Features

- RF Low Loss Filter for Remote Control Receivers - Excellent Rejection
- Small External Impedance Matching

### ▶ Saw Filter - Narrow Band Applications

- Automotive Keyless Entry - In-house Arrest Systems
- Tire Pressure Monitoring System - Wireless Security System



### ▶ Saw Filter - Narrow Band Typical Specification

Center Frequency (MHz)	Package	Bandwidth at 3dB (KHz)	Operating Temperature (°C)	Storage Temperature (°C)	Insertion Loss (dB)	FTC (ppm/°C)	Aging (ppm/yr)
300 ~ 915	SMD5*5	500~ 1000	-40 ~ +85	-40 ~ +85	3.0	0.033	10
	TO39	500~ 1000	-20 ~ +85	-40 ~ +85	3.0	0.033	10
	F11	500~ 1000	-20 ~ +85	-40 ~ +85	3.0	0.033	10

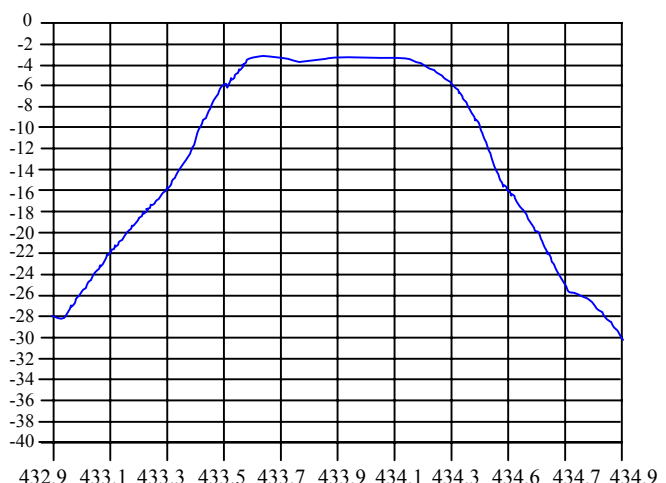
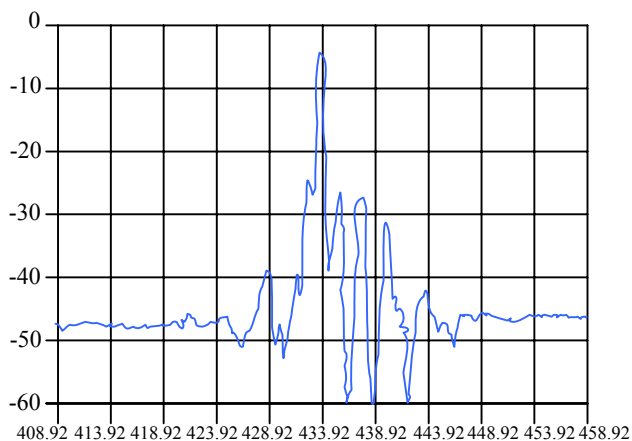
### ▶ Saw Filter - Narrow Band FM Series [SDM 5×5]

System	Center Freq.(MHz)	B/W(MHz)	Part Number	Package	Marking Code
Front-End Filter	303.875	0.5-0.8	FMC303D87-B1	SMD 5x5	FB1
Front-End Filter	315.00	0.5-0.8	FMC315D00-B2	SMD 5x5	FB2
Front-End Filter	390.00	0.5-0.8	FMC390D00-B3	SMD 5x5	FB3
Front-End Filter	418.00	0.5-0.8	FMC418D00-B4	SMD 5x5	FB4
Front-End Filter	433.92	0.5-0.8	FMC433D92-B5	SMD 5x5	FB5
Front-End Filter	868.35	0.5-0.8	FMC868D35-B6	SMD 5x5	FB6

### ▶ Saw Filter - Narrow Band FM Series [TO - 39]

System	Center Freq.(MHz)	B/W(MHz)	Part Number	Package	Marking Code
Front-End Filter	315.00	0.5-0.8	FMT315D00-D2	TO-39	FD2
Front-End Filter	390.00	0.5-0.8	FMT390D00-D3	TO-39	FD3
Front-End Filter	433.92	0.5-0.8	FMT433D92-D5	TO-39	FD5
Front-End Filter	868.35	0.5-0.8	FMT868D35-D6	TO-39	FD6

### ▶ Saw Filter - Narrow Band Typical Filter Response





# Saw Resonators

## RO Series - Saw Resonators

### ▶ Saw Resonator Features

- Low Series Resistance, Quartz Stability, Small Sizes

### ▶ Saw Resonator Applications

- Automotive Keyless Entry, In-house Arrest Systems, Data link, Tire pressure Monitoring System, Wireless Security Systems, Wireless Barcode Reader, Wireless Keyboards, Wireless Mouse, Wireless Joysticks, Wireless Lamp Switching.....

### ▶ Saw Resonator Typical Specification

Center Frequency (MHz)	Port	Package	Tolerance (KHz)	Operating Temperature (°C)	Storage Temperature (°C)	Insertion Loss(dB)	FTC (ppm/°C)	Aging (ppm/yr)
300~915	1	SMD5*5	± 75	-40 ~ +85	-40 ~ +85	1.1	0.033	10
		TO39		-20 ~ +85	-40 ~ +85	1.4	0.033	10
		F11		-20 ~ +85	-40 ~ +85	1.6	0.033	10

### ▶ Saw Resonator RO Series [SMD 5×5]

System	CenterFreq. (MHz)	IL(Typ.) (dB)	Tolerance (KHz)	Part Number	Package	MarkingCode
Remote	303.825	1.50	±75	ROC303D82-O1	SMD 5x5	RO1
Remote	303.875	1.50	±75	ROC303D87-O2	SMD 5x5	RO2
Remote	315.00	1.50	±75	ROC315D00-O6	SMD 5x5	RO6
Remote	345.50	1.50	±75	ROC390D00-O7	SMD 5x5	ROL
Remote	418.00	1.50	±75	ROC418D00-OA	SMD 5x5	ROA
Remote	426.55	1.50	±75	ROC426D55-OB	SMD 5x5	ROB
Remote	433.42	1.50	±75	ROC433D42-OE	SMD 5x5	ROE
Remote	433.92	1.50	±75	ROC433D92-OF	SMD 5x5	ROF
Remote	434.00	1.50	±75	ROC434D00-OL	SMD 5x5	ROL
Remote	434.52	1.50	±75	ROC434D52-OG	SMD 5x5	ROG
Remote	868.35	1.80	±150	ROC868D35-OJ	SMD 5x5	ROJ

### ▶ Saw Resonator RO Series [TO-39]

System	Center Freq. (MHz)	IL(Typ.) (dB)	Tolerance (KHz)	Part Number	Package	MarkingCode
Remote	303.825	1.50	±75	ROT303D82-P1	TO-39	RP1
Remote	303.875	1.50	±75	ROT303D87-P2	TO-39	RP2
Remote	315.00	1.50	±75	ROT315D00-P6	TO-39	RP6
Remote	418.00	1.50	±75	ROT418D00-PA	TO-39	RPA
Remote	426.55	1.50	±75	ROT426D55-PB	TO-39	RPB
Remote	433.42	1.50	±75	ROT433D42-PE	TO-39	RPE
Remote	433.92	1.50	±75	ROT433D92-PF	TO-39	RPF
Remote	434.00	1.50	±75	ROT434D00-PL	TO-39	RPL
Remote	434.52	1.50	±75	ROT434D52-PG	TO-39	RPG



# Saw Resonators

## ► Saw Resonator RO Series [F-11]

System	Center Freq.(MHz)	IL(Typ.) (dB)	Tolerance (KHz)	Part Number	Package	MarkingCode
Remote	315.00	1.60	±75	ROF315D00-Q6	F-11	RQ6
Remote	433.92	1.60	±75	ROF433D92-QF	F-11	RQF
Remote	434.00	1.60	±75	ROF434D00-QL	F-11	RQL

## ► Saw Resonator Typical Response

