■ SAW Device Model list

●For Automotive

Model	Nominal Frequency (MHz)	Passband width (MHz)	Insertion Attenuation (dB)	Dimensions (mm)	Main application	Page
WFG63D0315CG	315	1	1.3	3.0×3.0×1.05	Keyless Entry System	3, 4
WFC68W0315CH	315	0.8	2.3	3.0×3.0×1.05	Keyless Entry System	5, 6
WFG99C0433CG	433.92	1.71	1.4	3.0×3.0×1.05	Keyless Entry System	7, 8
WFC68K0433CJ	433.92	0.8	2.4	3.0×3.0×1.05	Keyless Entry System	9, 10
WFC75C1472CE	1472	40	2.6	3.0×3.0×1.05	Satellite Radio	11
WFF93A1582UE	1582.355	46.61	2.0	1.4×1.1×0.6	GPS/GLONASS/BEIDOU	12
WFC38P1588CD	1588	56	2.1	3.0×3.0×1.05	GPS/GLONASS/BEIDOU	13, 14

● For Base Station RF

Model	Nominal Frequency (MHz)	Passband width (MHz)	Insertion Attenuation (dB)	Dimensions (mm)	Main application	Page
WFB39A0836CE	836.5	25	2	3.0×3.0×1.25	GSM850 Base Station	–
WFB41A0895CD	895.5	39	2.7	3.0×3.0×1.05	RGSM Base Station	–
WFB40A1950CD	1950	60	2.5	3.0×3.0×1.05	WCDMA Base Station Band1	–
WFB40B1880CD	1880	60	2.5	3.0×3.0×1.05	WCDMA Base Station Band2	–
WFB40C1747CD	1747.5	75	2.8	3.0×3.0×1.05	WCDMA Base Station Band3	–
WFB40D1732CE	1732.5	45	3.3	3.0×3.0×1.25	WCDMA Base Station Band4	–
WFB40E0836CE	836.5	25	2.4	3.0×3.0×1.05	WCDMA Base Station Band5	–
WFB40R0881CE	881.5	25	3.0	3.0×3.0×1.05	WCDMA Base Station Band5_DL	–
WFB40F2535CE	2535	70	3.3	3.0×3.0×1.25	WCDMA Base Station Band7	15
WFB40W2655CE	2655	70	3.5	3.0×3.0×1.05	WCDMA Base Station Band7_DL	–
WFB40G0897CD	897.5	35	4.0	3.0×3.0×1.05	WCDMA Base Station Band8	–
WFB40S0942CD	942.5	35	3.5	3.0×3.0×1.05	WCDMA Base Station Band8_DL	–
WFB40K0707CE	707	18	2.5	3.0×3.0×1.05	WCDMA Base Station Band12	–
WFB40L0782CE	782	10	2.8	3.0×3.0×1.05	WCDMA Base Station Band13	–
WFB40M0787CE	787.5	21	2.0	3.0×3.0×1.05	WCDMA Base Station Band13 / 14	–
WFB40T0847CD	847	30	3.0	3.0×3.0×1.05	WCDMA Base Station Band20_UL	–
WFB40N1900CE	1900	40	3.0	3.0×3.0×1.05	WCDMA Base Station Band39	–
WFB40P2350CD	2350	100	3.0	3.0×3.0×1.05	WCDMA Base Station Band40	–

● For Base Station IF

Model	Nominal Frequency (MHz)	Passband width (MHz)	Insertion Attenuation (dB)	Dimensions (mm)	Main application	Page
WFA47A0140CE	140	3.125	11	13.3×6.5×1.8	WiMAX Base Station	–
WFA47C0140CD	140	6.25	12.5	13.3×6.5×1.8	WiMAX Base Station	–
WFE23A0153CB	153.6	26	10.5	7.0×5.0×1.35	Base Station IF	–
WFE23B0153CB	153.6	36	12	7.0×5.0×1.35	Base Station IF	–
WFE23C0192CB	192	46	11.5	7.0×5.0×1.35	Base Station IF	–
WF789B0260CE	260.1	4	6	5.2×4.8×1.3	Wireless Communication	–

■ SAW Device Model list

●**For Land Mobile Radio System**

Model	Nominal Frequency (MHz)	Passband width (MHz)	Insertion Attenuation (dB)	Dimensions (mm)	Main application	Page
WFB17B0860CE	Filter1:769 Filter2:860.5	14 19	2.6 2.7	3.0×3.0×1.05	Land Mobile Radio System	–
WFB17F0767CD	Filter1:758 Filter2:767	14 31	2.6 3.3	3.0×3.0×1.05	Land Mobile Radio System	–
WFB17G0856CE	Filter1:772 Filter2:856	8 10	2.6 2.7	3.0×3.0×1.05	Land Mobile Radio System	–
WFA10A0809CD	809.5	31	3.5	3.0×3.0×1.25	Land Mobile Radio System	–
WFA57A0841CH	841	3	5	3.0×3.0×1.25	Land Mobile Radio System	–
WFB17E0860CE	Filter1:772 Filter2:860.5	8 19	2.6 2.7	3.0×3.0×1.05	Land Mobile Radio System	–
WFD23A0860CE	860.5	19	3	3.0×3.0×1.05	Land Mobile Radio System	–
WFC11B0922CG	922.5	±2	3.5	3.0×3.0×1.05	Land Mobile Radio System	16

●**For Specified Low Power Radio**

Model	Nominal Frequency (MHz)	Passband width (MHz)	Insertion Attenuation (dB)	Dimensions (mm)	Main application	Page
WF871B0421CD	421.9	±0.5	2	3.0×3.0×1.25	Specified Low Power Radio	–
WFA17A0422CL	421.9	±0.5	3.5	3.0×3.0×1.25	Specified Low Power Radio	–
WF871P0426CD	426	±0.5	2	3.0×3.0×1.25	Specified Low Power Radio	–
WFC93C0426CL	426	±0.5	3.5	3.0×3.0×1.05	Specified Low Power Radio	–
WF871E0428CD	428	±2.0	2.5	3.0×3.0×1.25	Specified Low Power Radio	–
WF871Q0429CD	429.42	±0.5	2	3.0×3.0×1.25	Specified Low Power Radio	–
WFC93A0429CL	429.55	±0.4	3.5	3.0×3.0×1.05	Specified Low Power Radio	–
WFC93B0429CL	429.42	±0.5	3.5	3.0×3.0×1.05	Specified Low Power Radio	17
WF871L0433CD	433.92	±0.87	2	3.0×3.0×1.25	Specified Low Power Radio	–
WF871G0440CD	440	±0.5	2	3.0×3.0×1.25	Specified Low Power Radio	–
WF998C0915CE	915	26	2.5	3.0×3.0×1.25	Specified Low Power Radio	–
WFC30A0915FE	915	26	2.8	1.4×1.1×0.5	Specified Low Power Radio	–
WFB69A0866CF	866.5	7.0	2.5	3.0×3.0×1.25	Short-range Wireless	–
WFC30B0924FF	924	8	3.2	1.4×1.1×0.5	Short-range Wireless	18
WFC48B0920CE	920.1	6.8	3	3.0×3.0×1.05	RFID	–
WFD51A0920FE	920.1	6.8	3	1.4×1.1×0.5	RFID	–
WFD14C0925CG	925.8	4.6	3	3.0×3.0×1.05	Smart Meter	–
WFD79C0925FG	925.8	4.6	3	1.4×1.1×0.5	Smart Meter	19
WFA27C0869CH	869	2.0	3.9	3.0×3.0×1.25	Remote Controller	–
WFD79A0869FH	869	2.0	3.9	1.4×1.1×0.5	Home Security	–

Some products are not listed in this catalog.
For details, please see our website (https://www.ndk.com/).

WFG63D0315CG

For Automotive

■ Features

SAW Filter for Remote Keyless Entry System(315MHz).

- ●Compact. (3.0×3.0mm)
- ●Support a wide operating temperature range(-40°C to + 105 °C).
- ●Excellent shock resistance.
- ●A filter with low insertion loss.
- ●Meets the requirements for re-flow profiling using lead-free solder.
- ●Conforms to AEC-Q200.

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

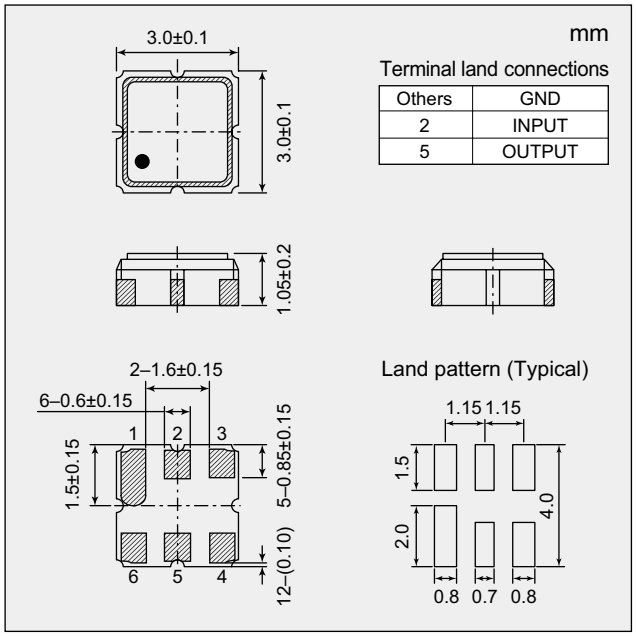
■ Specifications

Model		WFG63D0315CG		
Item		min.	typ.	max.
Nominal Frequency (MHz)		–	315	–
Maximum Insertion Attenuation(dB)	314.5 to 315.5 MHz	–	1.3	2.0
Pass Band Ripple (dB)	314.5 to 315.5 MHz	–	0.4	1.2
Guaranteed Attenuation (0dB used as standard) (dB)	10 to 295MHz	50	65	–
	295 to 303MHz	35	55	–
	303 to 307MHz	25	44	–
	325 to 333MHz	25	30	–
	333 to 345MHz	35	56	–
	345 to 1000MHz	40	55	–
	1000 to 1500MHz	35	58	–
	1500 to 2000MHz	30	55	–
	2000 to 2500MHz	26	42	–
Operating Temperature Range (°C)		–40 to +105		
Terminating Impedance (Ω)		50		

WFG63D0315CG

For Automotive

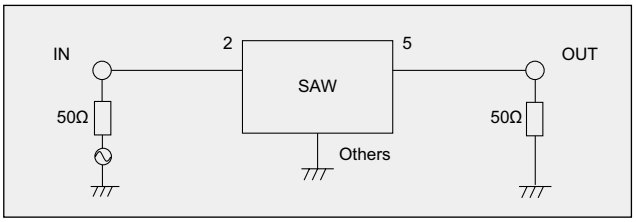
■ Dimensions



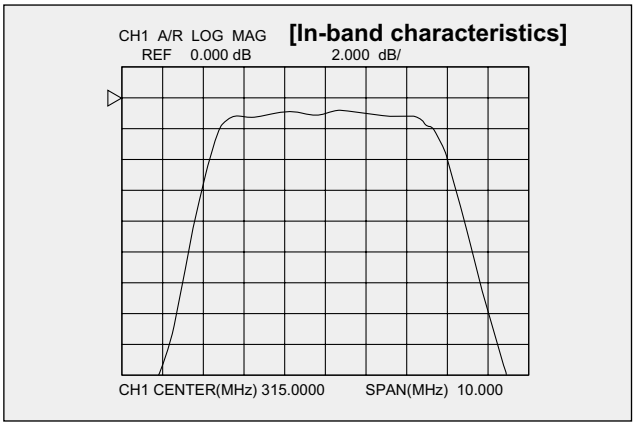
Terminal land connections

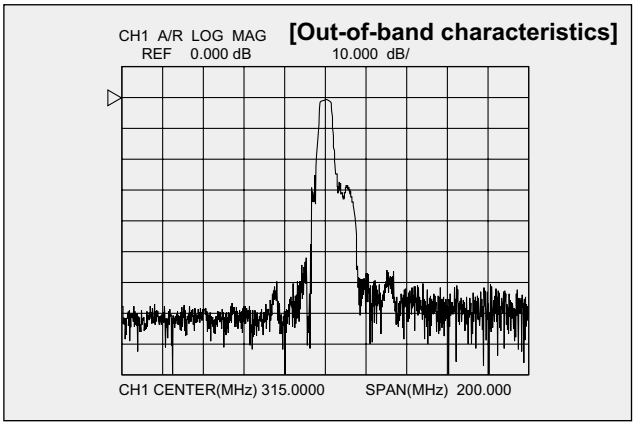
Others	GND
2	INPUT
5	OUTPUT

■ Matching Circuit



■ Characteristics





WFC68W0315CH

For Automotive

■ Features

SAW Filter for Remote Keyless Entry System (315MHz).

- ●Compact. (3.0×3.0mm)
- ●Support a wide operating temperature range (-40°C to + 95 °C).
- ●Excellent shock resistance.
- ●A filter with low insertion Attenuation.
- ●Meets the requirements for re-flow profiling using lead-free solder.
- ●Conforms to AEC-Q200.

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

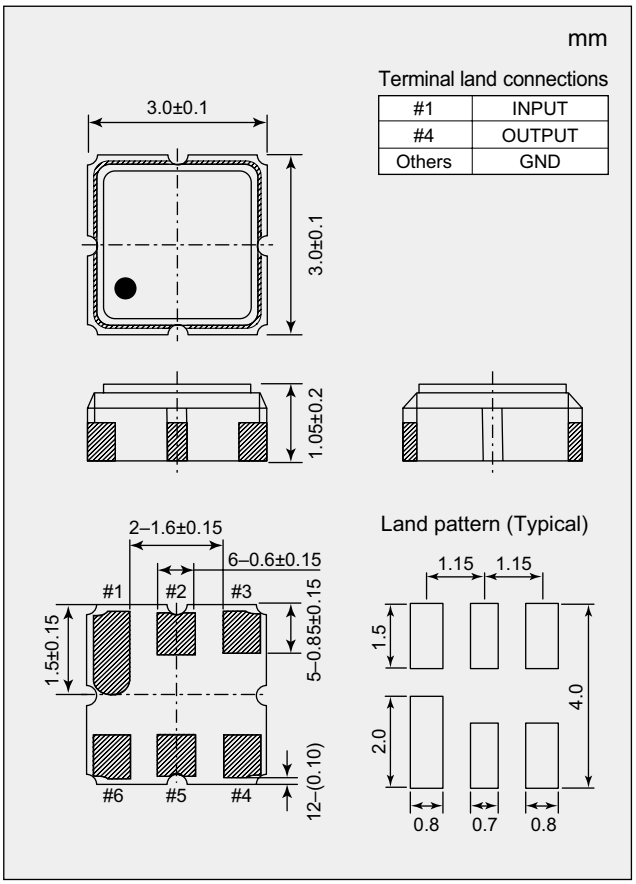
■ Specifications

Model		WFC68W0315CH		
Item		Min.	Typ.	Max.
Nominal Frequency (MHz)		–	315	–
Minimum Insertion Attenuation (dB)		–	2.3	2.9
Pass Band Ripple (314.82 to 315.18MHz) (ns)		–	0.8	3.0
Guaranteed Attenuation (dB) (Relative Minimum Insertion Attenuation)	10 to 280MHz	50	55	–
	280 to 295MHz	45	50	–
	295 to 308MHz	38	44	–
	308 to 312.8MHz	25	33	–
	312.8 to 313.2MHz	33	40	–
	313.2 to 314.1MHz	12	16	–
	315.9 to 316.5MHz	16	20	–
	316.5 to 320MHz	20	25	–
	320 to 325MHz	13	18	–
	325 to 335MHz	36	44	–
	335 to 380MHz	43	55	–
	380 to 600MHz	50	63	–
	600 to 1500MHz	60	65	–
	1500 to 2500MHz	50	62	–
Operating Temperature Range (°C)		–40 to +95		
Terminating Impedance (Ω)		50 (with matching)		

WFC68W0315CH

For Automotive

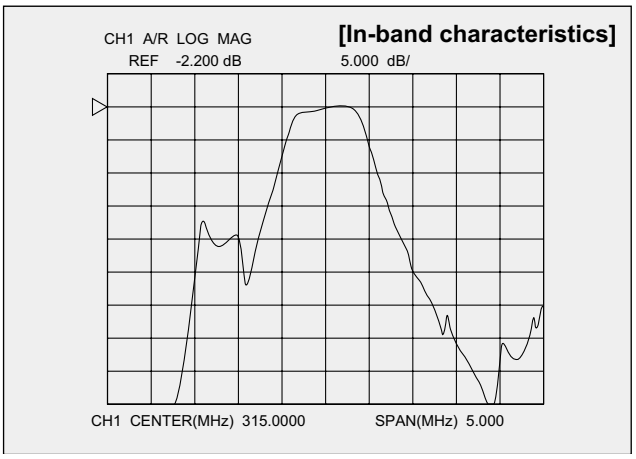
■ Dimensions

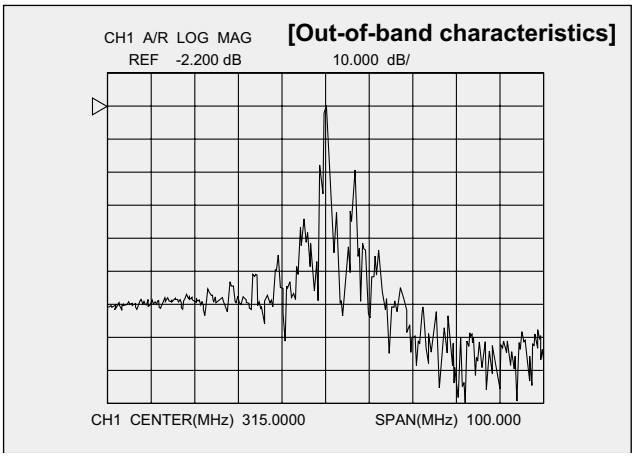


Terminal land connections

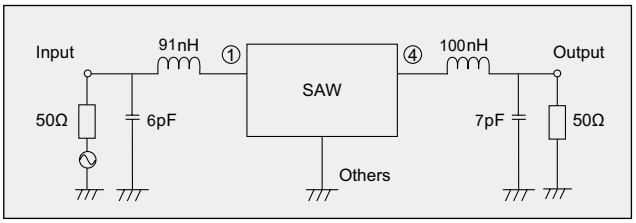
#1	INPUT
#4	OUTPUT
Others	GND

■ Characteristics





■ Matching Circuit



WFG99C0433CG

For Automotive

■ Features

SAW Filter for Remote Keyless Entry System(433MHz).

- ●Compact. (3.0×3.0mm)
- ●Support a wide operating temperature range(-40°C to + 105 °C).
- ●Excellent shock resistance.
- ●A filter with low insertion loss.
- ●Meets the requirements for re-flow profiling using lead-free solder.
- ●Conforms to AEC-Q200.

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

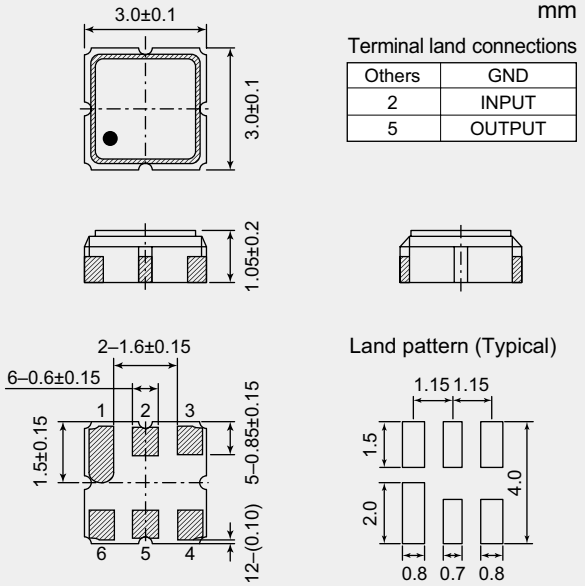
■ Specifications

Model		WFG99C0433CG		
Item		min.	typ.	max.
Nominal Frequency (MHz)		–	433.92	–
Maximum Insertion Attenuation (dB)	433 to 434.71 MHz	–	1.4	2.7
Pass Band Ripple (dB)	433 to 434.71 MHz	–	0.4	1.4
Guaranteed Attenuation (0dB used as standard) (dB)	10 to 380 MHz	55	70	–
	380 to 413.5 MHz	45	62	–
	413.5 to 424 MHz	23	54	–
	443.75 to 454 MHz	20	28	–
	454 to 460 MHz	28	40	–
	460 to 470MHz	40	60	–
	470 to 650MHz	48	58	–
	650 to 1000MHz	40	57	–
	1000 to 1500MHz	35	52	–
	1500 to 2000MHz	30	52	–
	2000 to 2500MHz	26	53	–
Operating Temperature Range (°C)		–40 to +105		
Terminating Impedance (Ω)		50		

WFG99C0433CG

For Automotive

■ Dimensions

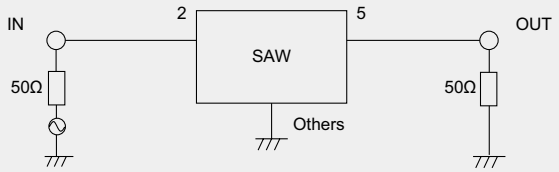


mm

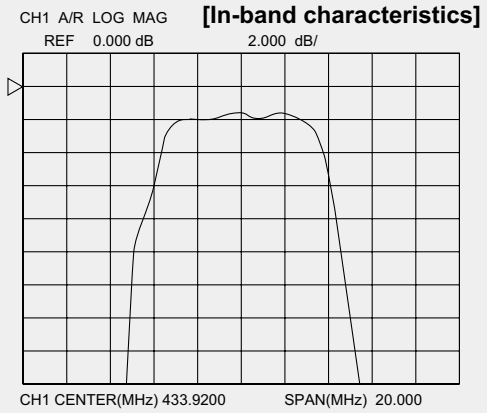
Terminal land connections

Others	GND
2	INPUT
5	OUTPUT

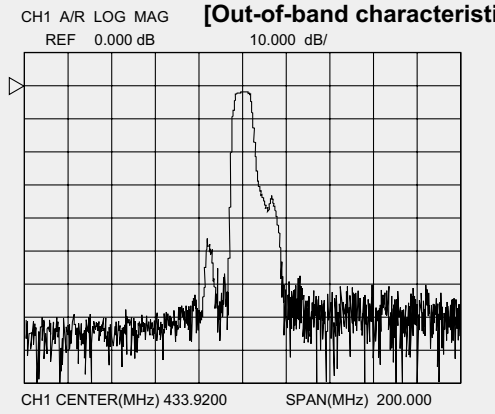
■ Matching Circuit



■ Characteristics



[In-band characteristics]



[Out-of-band characteristics]

WFC68K0433CJ

For Automotive

■ Features

SAW Filter for Remote Keyless Entry System(433MHz).

- Compact. (3.0×3.0mm)
- Support a wide operating temperature range(-40°C to + 95°C).
- Excellent shock resistance.
- A filter with low insertion loss.
- Meets the requirements for re-flow profiling using lead-free solder.
- Conforms to AEC-Q200.

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

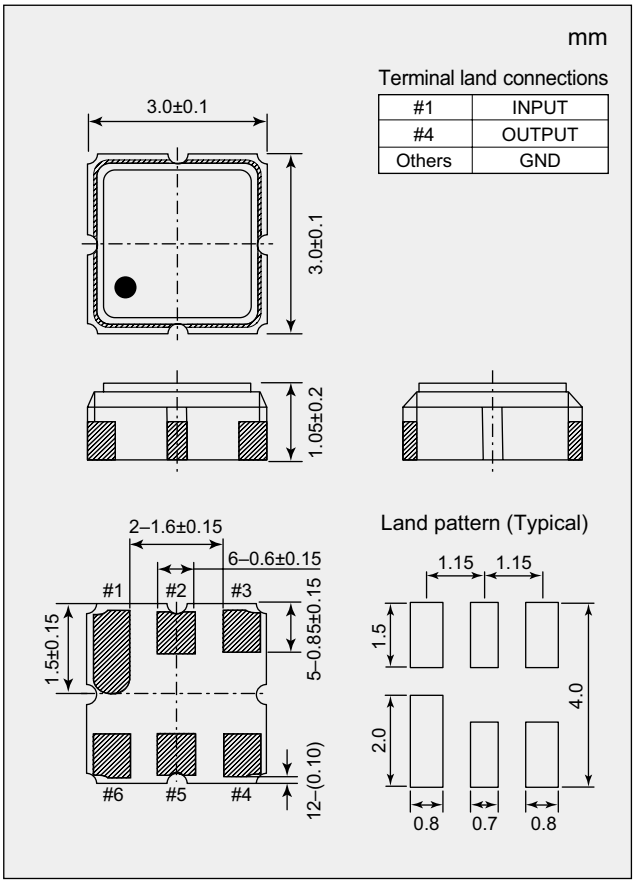
■ Specifications

Model		WFC68K0433CJ		
Item		Min.	Typ.	Max.
Nominal Frequency (MHz)		–	433.92	–
Minimum Insertion Attenuation (dB)		–	2.4	2.9
Pass Band Ripple (dB) (433.75 to 434.09MHz)		–	0.8	3.0
Guaranteed Attenuation (dB) (Relative Minimum Insertion Attenuation)	10 to 380MHz	55	60	–
	380 to 414MHz	50	55	–
	414 to 427MHz	46	52	–
	427 to 431.52MHz	24	32	–
	431.52 to 432.9Hz	15	23	–
	432.9 to 433.1MHz	13	18	–
	435.1 to 444.5MHz	17	22	–
	444.5 to 450MHz	40	48	–
	450 to 810MHz	47	52	–
	810 to 1500MHz	60	65	–
	1500 to 2500MHz	50	60	–
Operating Temperature Range (°C)		–40 to +95		
Terminating Impedance (Ω)		50 (with matching)		

WFC68K0433CJ

For Automotive

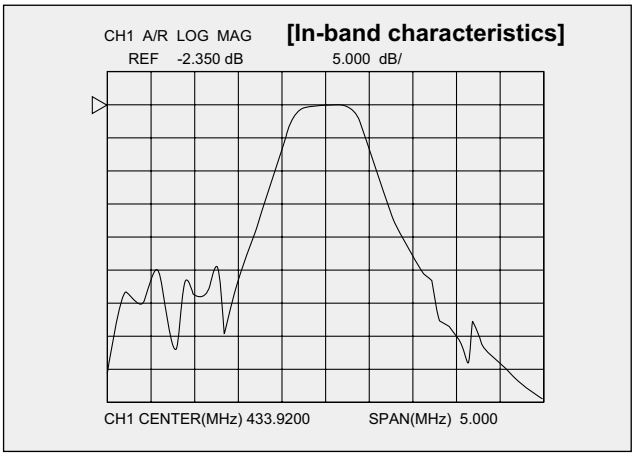
■ Dimensions

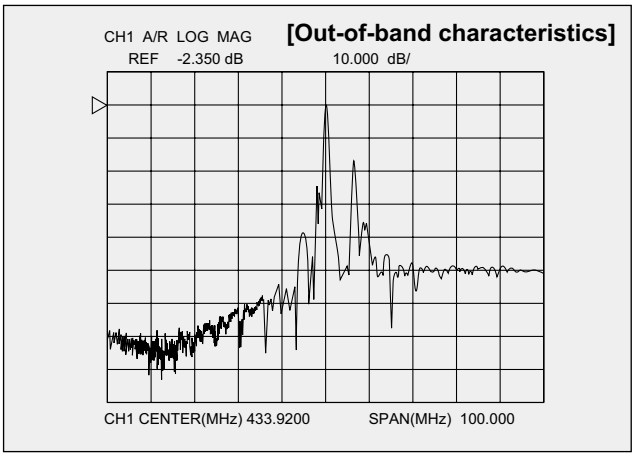


Terminal land connections

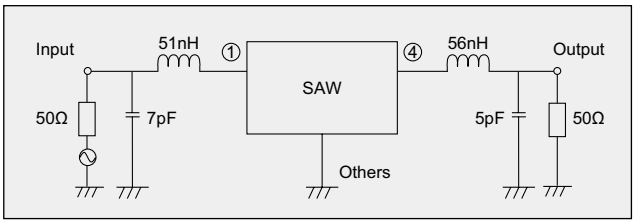
#1	INPUT
#4	OUTPUT
Others	GND

■ Characteristics





■ Matching Circuit



SAW Device

WFC75C1472CE

For Automotive

■ Features

- SAW Filter for Satellite radio.
- Excellent out-band attenuation.
- Compact. (3.0×3.0mm)

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

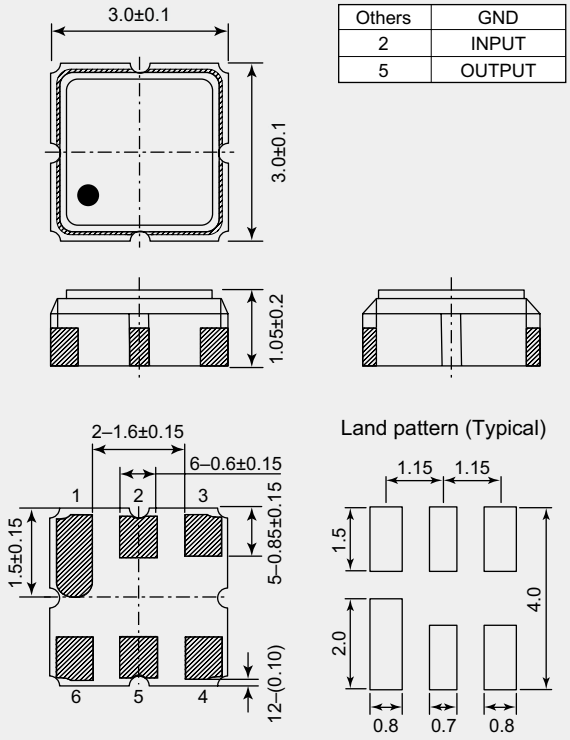
Model		WFC75C1472CE		
Item		min.	typ.	max.
Nominal Frequency : f0 (MHz)		–	1472	–
Insertion Attenuation (dB)	1452 to 1492 MHz	–	1.8	2.6
Pass Band Ripple (dB)	1452 to 1492 MHz	–	0.3	1.6
VSWR	1452 to 1492 MHz	–	1.7	2.1
Guaranteed Attenuation (dB)	500 to 1262 MHz	34	40	–
	1262 to 1382 MHz	25	35	–
	1382 to 1398 MHz	25	36	–
	1398 to 1414 MHz	20	34	–
	1547 to 1580 MHz	21	30	–
	1580 to 2200 MHz	25	31	–
Operating Temperature Range (°C)		−40 to +125		
Terminating Impedance (Ω)		50		

■ Dimensions

mm

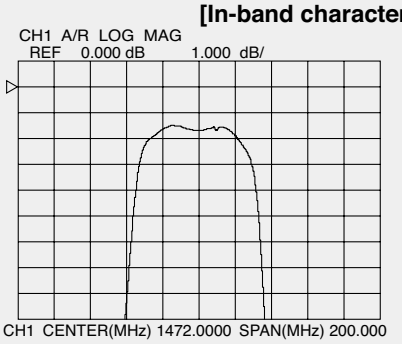
Terminal land connections

Others	GND
2	INPUT
5	OUTPUT



■ Characteristics

[In-band characteristics]



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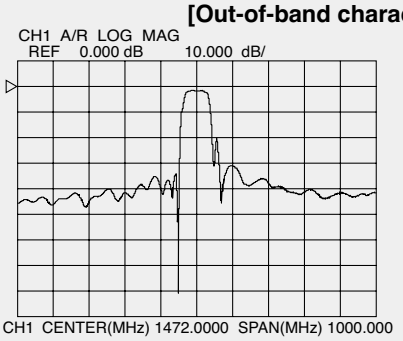


WFF93A1582UE

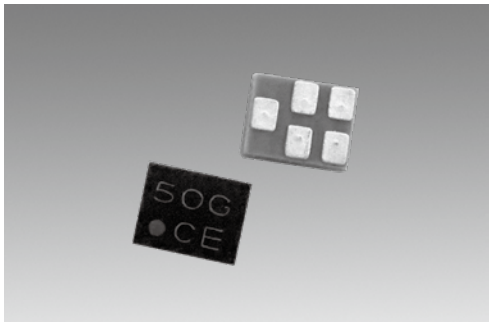
For Automotive

■ Features

- 1.5GHz band SAW Filter for Automotive GNSS(e.g., GPS, GLONASS, or BEIDOU).
- Conforms to AEC-Q200.
- Ultra compact and thin. (1.4×1.1×0.6mm)
- Support a wide operating temperature range(-40°C to + 85 °C).
- A filter with low Insertion Attenuation.
- Meets the requirements for re-flow profiling using lead-free solder.

Pb Free

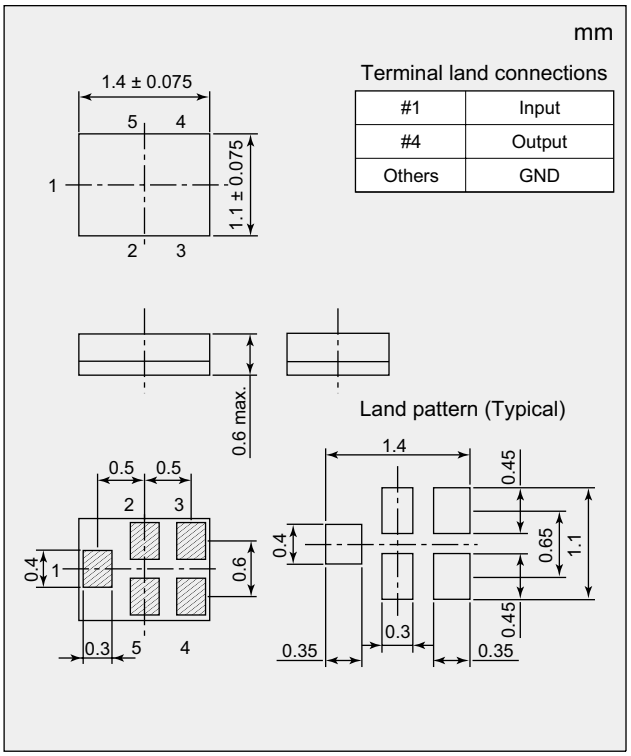
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



■ Specifications

Model		WFF93A1582UE		
Item		Min.	Typ.	Max.
Nominal Frequency (MHz)		–	1582.355	–
Maximum Insertion Attenuation (dB)	1574.42 to 1576.42MHz	–	1.0	1.4
	1559.05 to 1563.15MHz	–	1.4	2.0
	1573.37 to 1577.47MHz	–	1.0	2.0
	1597.78 to 1605.66MHz	–	1.3	2.0
VSWR	1574.42 to 1576.42MHz	–	1.3	2.0
	1559.05 to 1563.15MHz	–	1.5	2.0
	1573.37 to 1577.47MHz	–	1.4	2.0
	1597.78 to 1605.66MHz	–	1.5	2.0
Group Delay Distortion (ns)	1597.78 to 1605.66MHz	–	4	14
Guaranteed Attenuation(dB)	40 to 1000MHz	39	42	–
	1427 to 1453MHz	40	44	–
	1710 to 2000MHz	30	35	–
	2400 to 2600MHz	38	42	–
	2600 to 3000MHz	34	40	–
Operating Temperature Range (°C)		–40 to +85		
Terminating Impedance (Ω)		50		

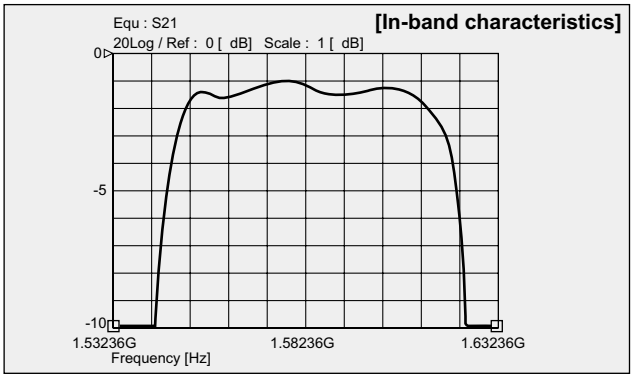
■ Dimensions

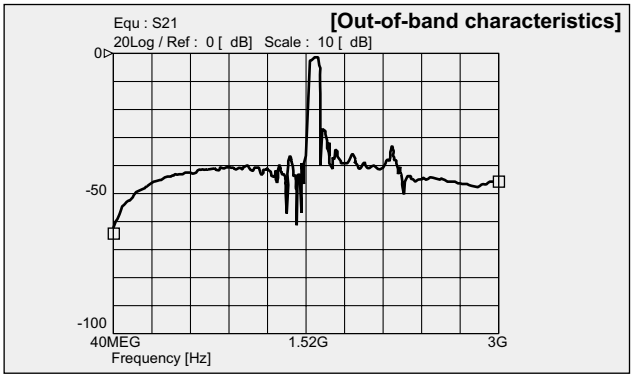


Terminal land connections

#1	Input
#4	Output
Others	GND

■ Characteristics





WFC38P1588CD

For Automotive

■ Features

- 1.5GHz band SAW Filter for Automotive GNSS(e.g., GPS, GLONASS, or BEIDOU).
- Compact. (3.0×3.0mm)
- Support a wide operating temperature range(-45°C to + 105 °C).
- Excellent shock resistance.
- A filter with low Insertion Attenuation.
- Meets the requirements for re-flow profiling using lead-free solder.
- Conforms to AEC-Q200.

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

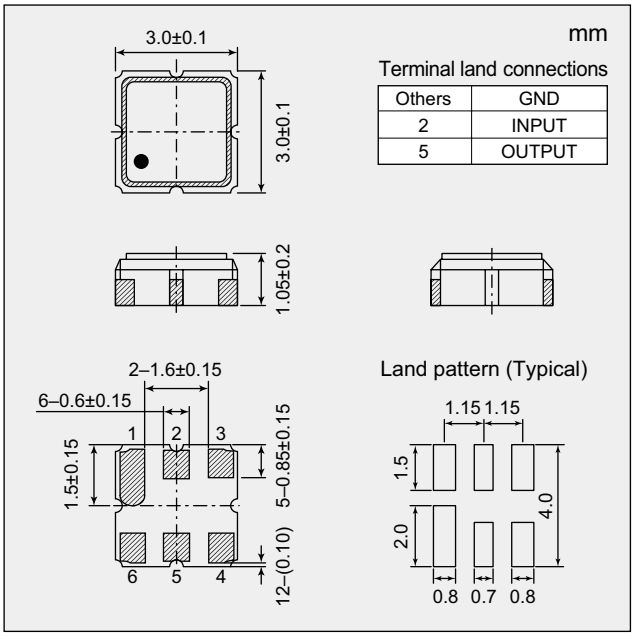
■ Specifications

Model		WFC38P1588CD		
Item		Min.	Typ.	Max.
Nominal Frequency (MHz)		–	1588	–
Insertion Attenuation (dB)	1560 to 1616MHz	–	2.1	3.0
	1574.42 to 1576.42MHz	–	1.4	2.1
	1597 to 1606MHz	–	1.7	2.5
VSWR	1560 to 1616MHz	–	2.0	2.8
Group Delay Distortion (ns)	1597 to 1606MHz	–	2.5	15
Guaranteed Attenuation (0dB used as standard) (dB)	800 to 900MHz	40	45	–
	1140 to 1349MHz	25	43	–
	1645 to 1720MHz	13	41	–
	1738 to 1840MHz	30	34	–
	1860 to 2500MHz	33	39	–
Operating Temperature Range (°C)		–45 to +105		
Terminating Impedance (Ω)		50		

WFC38P1588CD

For Automotive

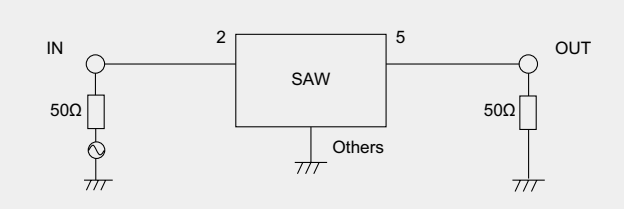
■ Dimensions



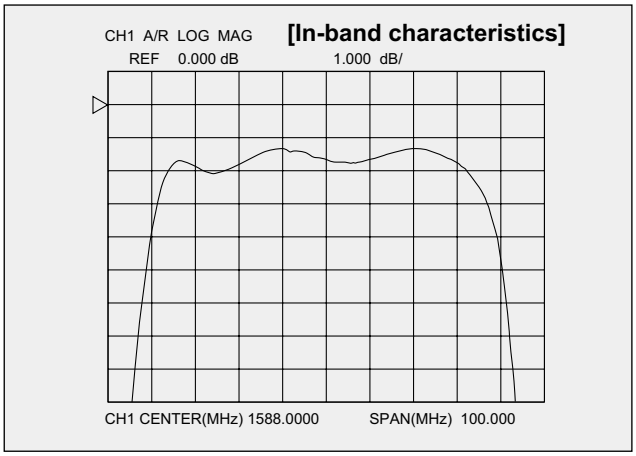
Terminal land connections

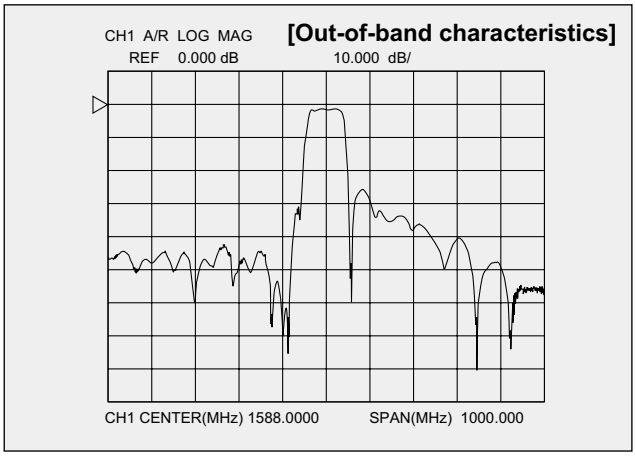
Others	GND
2	INPUT
5	OUTPUT

■ Matching Circuit



■ Characteristics





WFB40F2535CE

For Fixed Communication

■ Features

- RF SAW Filter for WCDMA Base Station (Band 7).
- Steep skirt characeristics.
- Compact. (3.0×3.0mm)

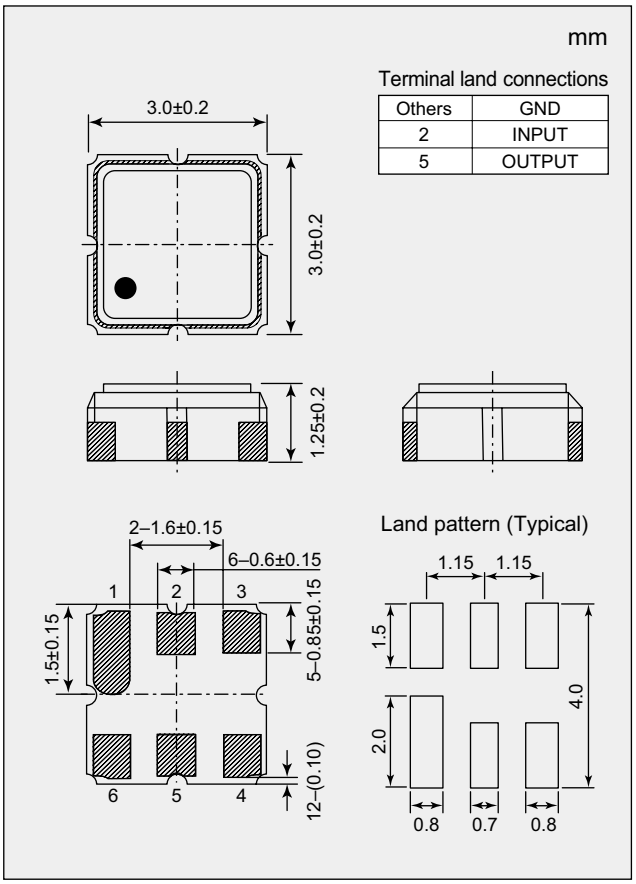
Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

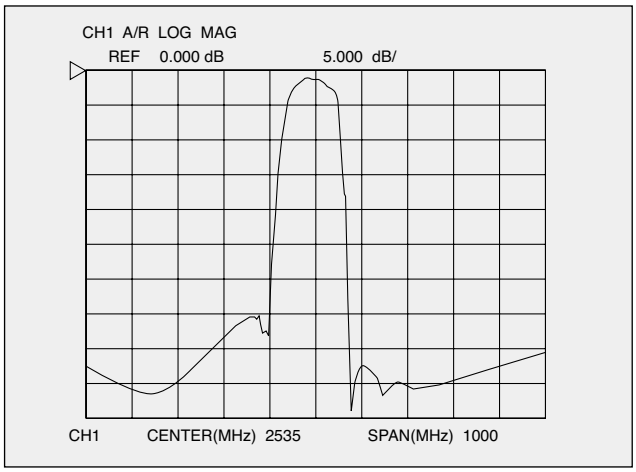
■ Specifications

Model		WFB40F2535CE		
Item		min.	typ.	max.
Nominal Frequency : fn (MHz)		−	2535	−
Pass Bandwidth (MHz)		2500	−	2570
Maximum Insertion Attenuation (dB)	2500 to 2570 MHz	−	2.3	3.3
Pass Band Ripple (dB)	2500 to 2570 MHz	−	0.9	2.0
VSWR	2500 to 2570 MHz	−	1.6	2.0
Group Delay Distortion (ns)	2500 to 2570 MHz	−	6	30
Guaranteed Attenuation (dB) (from the throughlevel)	100 to 1955 MHz	30	33	−
	1955 to 2100 MHz	35	43	−
	2620 MHz	28	43	−
Operating Temperature Range (°C)		−30 to +85		
Terminating Impedance (Ω)		50		

■ Dimensions



■ Characteristics



WFC11B0922CG

For Short-range Wireless

■ Features

- For land mobile radio system(Cordless telephone).
- Low Insertion Attenuation.
- Compact. (3.0×3.0mm)

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

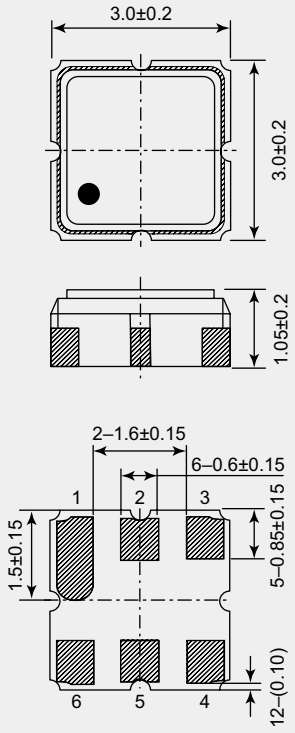
Model		WFC11B0922CG		
Item		min.	typ.	max.
Nominal Frequency : fn (MHz)		–	922.5	–
Minimum Insertion Attenuation (dB)		–	2.1	3.5
3dB Pass Bandwidth (MHz)		±2	±7	–
Guaranteed Attenuation (dB) (from the throughlevel)	882.5 to 901.5 MHz	30	40	–
	943.5 to 962.5 MHz	30	39	–
	910.5 MHz	8	22	–
	934.5 MHz	8	21	–
Operating Temperature Range (°C)		−20 to +85		
Terminating Impedance (Ω)		50		

■ Dimensions

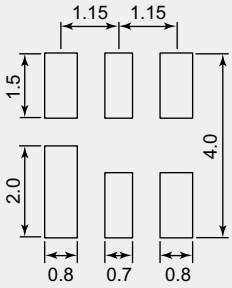
mm

Terminal land connections

Others	GND
2	INPUT
5	OUTPUT

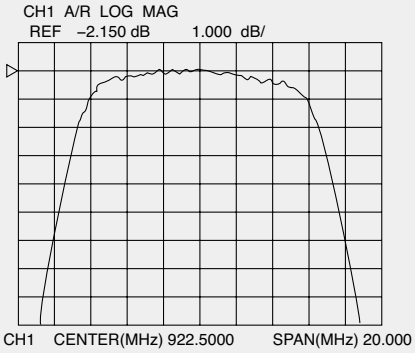


Land pattern (Typical)

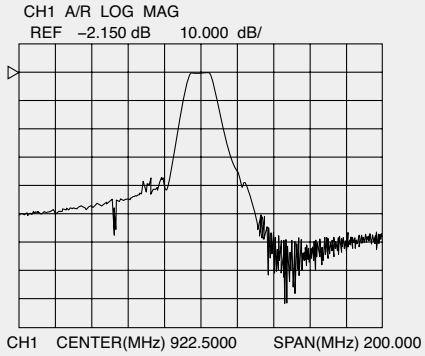


■ Characteristics

[In-band characteristics]



[Out-of-band characteristics]



SAW Device

WFC93B0429CL For Short-range Wireless

■ Features

- SAW filter for specified low power radio.
- A narrow band filter.
- Compact. (3.0×3.0mm)

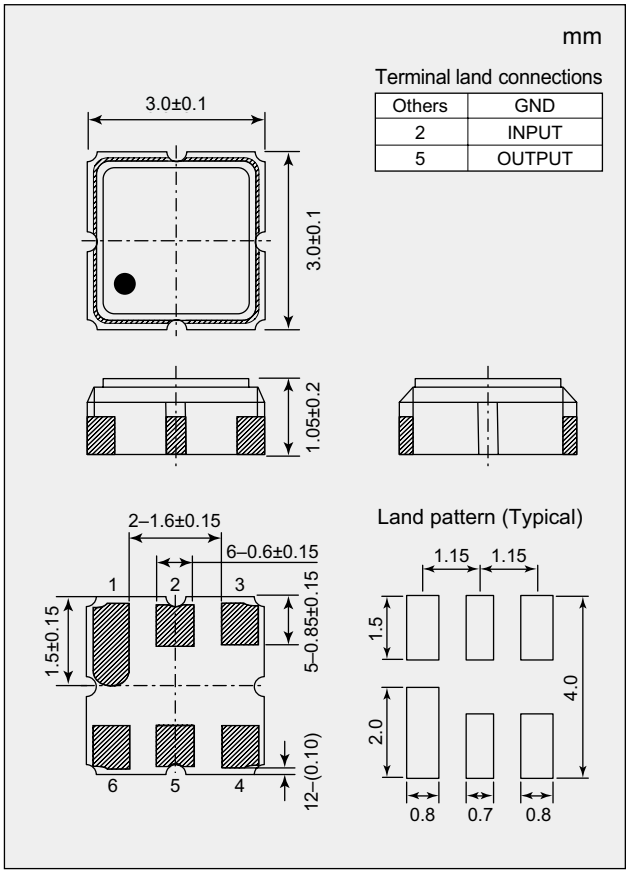
Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

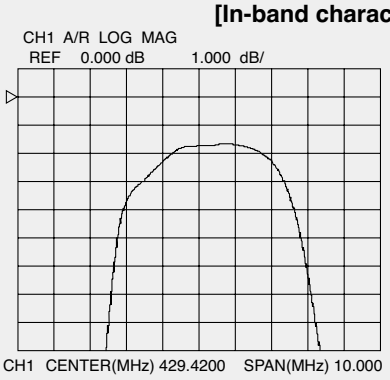
Model		WFC93B0429CL		
Item		min.	typ.	max.
Nominal Frequency : f0 (MHz)		−	429.42	−
Insertion Attenuation (dB)	428.92 to 429.92 MHz	−	1.9	3.5
Pass Band Ripple (dB)	428.92 to 429.92 MHz	−	0.2	1.5
VSWR	428.92 to 429.92 MHz	−	1.5	2.5
Guaranteed Attenuation (dB)	386.62 MHz	50	60	−
	408.02 MHz	50	60	−
Operating Temperature Range (°C)		−20 to +70		
Terminating Impedance		50		

■ Dimensions

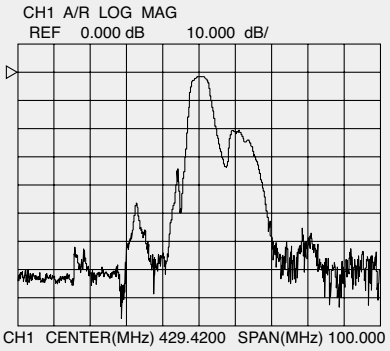


■ Characteristics

[In-band characteristics]



[Out-of-band characteristics]



WFC30B0924FF

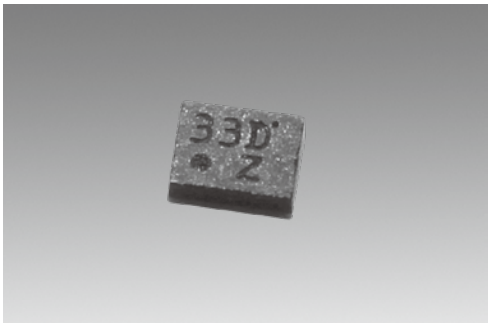
For Short-range Wireless

■ Features

- SAW filter for specified low power radio.
- Ultra compact and light. (1.4×1.1×0.5mm)

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



■ Specifications

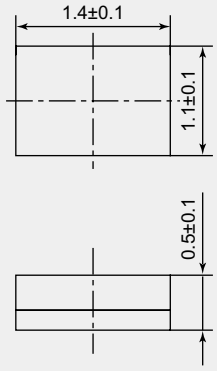
Model		WFC30B0924FF		
Item		min.	typ.	max.
Nominal Frequency (MHz)		–	924	–
Maximum Insertion Attenuation (dB)	(920 to 928MHz)	–	2.3	3.2
Pass Band Ripple (dB)	(920 to 928MHz)	–	0.3	1.0
Guaranteed Attenuation (dB)	40 to 874MHz	40	54	–
	874 to 890MHz	35	47	–
	890 to 905MHz	23	34	–
	945 to 960MHz	23	29	–
	960 to 995MHz	23	31	–
	995 to 1500MHz	40	52	–
	1500 to 3000MHz	20	40	–
Operating Temperature Range (°C)		–40 to +85		
Terminating Impedance (Ω)		50		

■ Dimensions

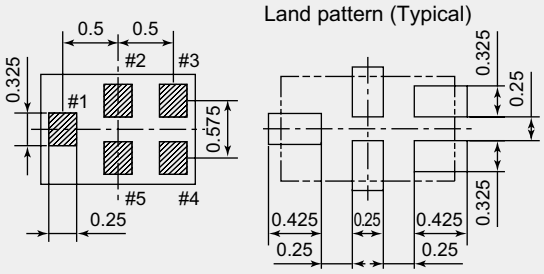
mm

Terminal land connections

#1	INPUT
#4	OUTPUT
Others	GND

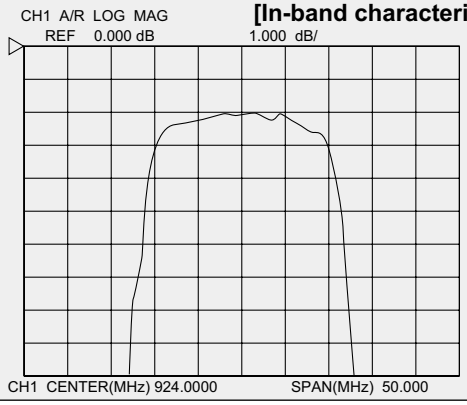


Land pattern (Typical)

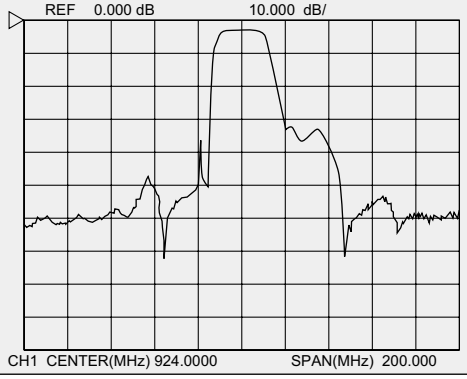


■ Characteristics

[In-band characteristics]



[Out-of-band characteristics]



SAW Device

WFD79C0925FG

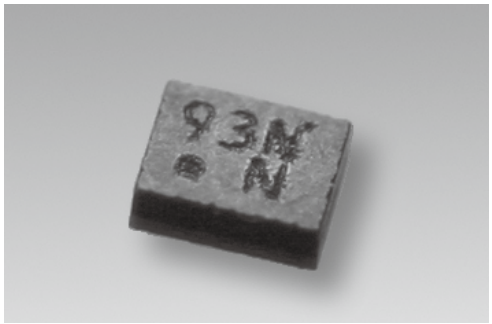
For Short-range Wireless

■ Features

- SAW filter for Smart Meter.
- Ultra compact. (1.4×1.1mm)

Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



■ Specifications

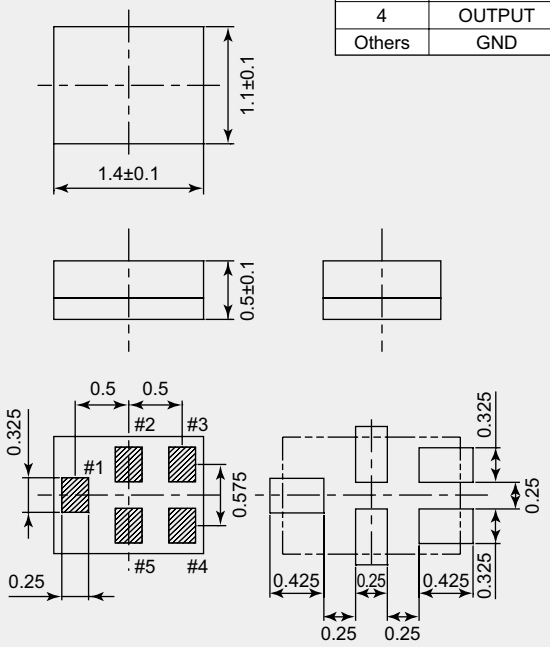
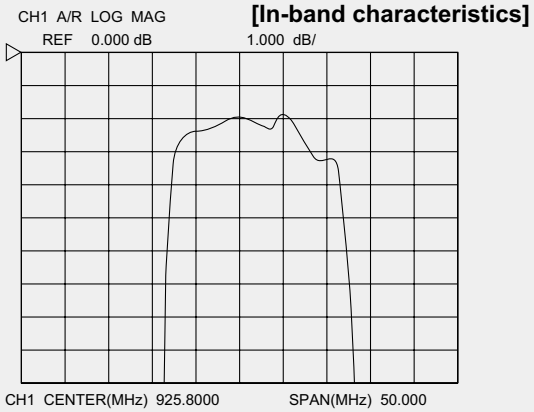
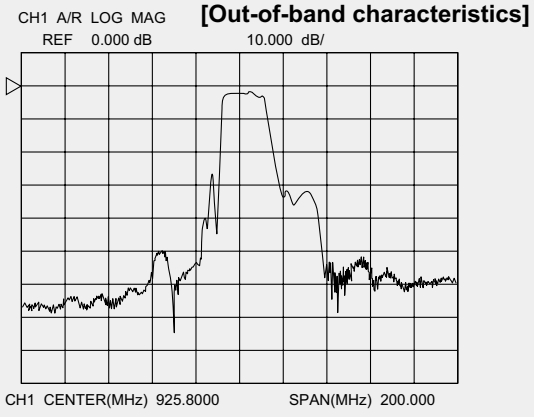
Model		WFD79C0925FG		
Item		min.	typ.	max.
Nominal Frequency (MHz)		–	925.8	–
Maximum Insertion Attenuation (dB) (923.5 to 928.1MHz)		–	2.1	3.0
Pass Band Ripple (923.5 to 928.1MHz)		–	0.4	1.8
Guaranteed Attenuation (dB)	815MHz to 845MHz	40	55	–
	860MHz to 890MHz	40	50	–
	900MHz to 915MHz	15	25	–
	945MHz to 960MHz	15	30	–
Operating Temperature Range (°C)		-25 to +75		
Terminating Impedance (Ω)		50		

■ Dimensions

mm

Terminal land connections

1	INPUT
4	OUTPUT
Others	GND



■ Characteristics