Document No. : EQM10-4KZ-D3ZX-1870

KYOCERA SAW Filter for Connectivity Application

Jan., 27, 2014

KYOCERA Corporation
Corporate Electronic Comp. Group
Circuit Device Department

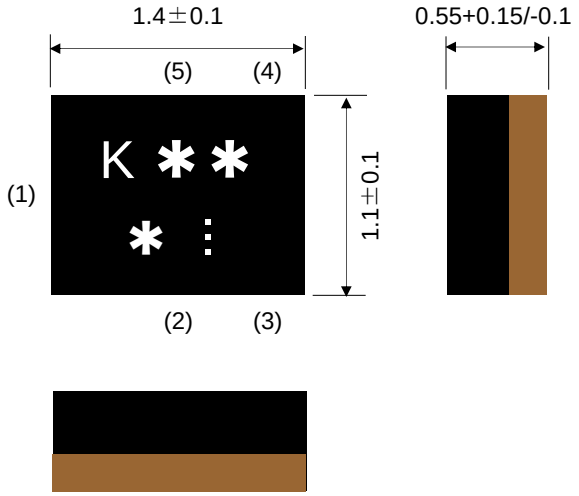
Line-up of SAW Filter for GNSS / WLAN

Items	Type Name	Dimensions [mm]	Output Imp. [ohm]	Sample	Mass Production	Operating Temp. Range [deg.C]
GPS (Standard Type)	SF14-1575F5UUA1	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	-30~+85
GPS (Ultra Low Loss Type)	SF14-1575F5UUC1	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	
GPS (Low Loss, Balanced Type)	SF14-1575M5UBA1	1.4 x 1.1 x 0.55	100ohm Balance	Available	Started	
GPS (High Att., Balance Type)	SF14-1575M5UBB1	1.4 x 1.1 x 0.55	100ohm Balance	Available	Started	
GPS/GLONASS/COMPASS	SF14-1582M5UUD2	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	
GPS (Low Loss, Balanced Type)	SF14-1575M5UBA2	1.4 x 1.1 x 0.55	100ohm Balance	Available	Started	-40~+85
GPS (Standard Type)	SF14-1575F5UUA7	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	
GPS/GLONASS/COMPASS	SF14-1582M5UUD1	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	
WLAN/Bluetooth	SF14-2446M5UUA3	1.4 x 1.1 x 0.55	50ohm Unbalance	Available	Started	-30~+85

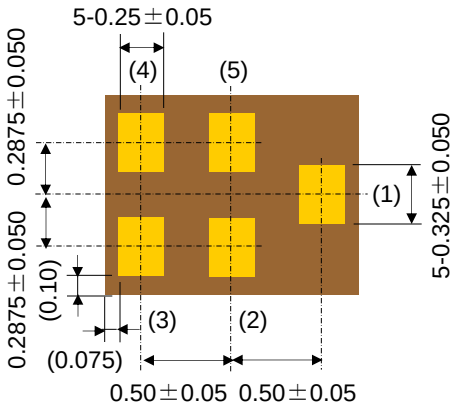
Package Information of 1411 Size SAW Filter

Dimensions

(Top View)



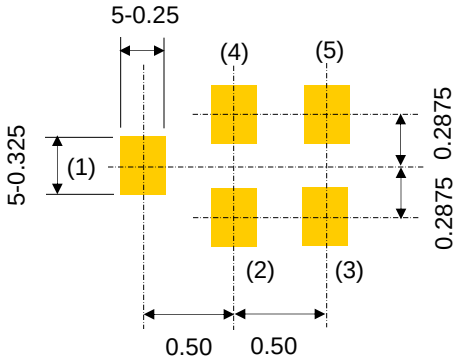
(Bottom View)



K	:	KYOCEAR Logo
✻✻	:	Identification No.
M	:	Monthly Code
⋮	:	Index mark of ten days

Recommendable Land Pattern

(Top View)



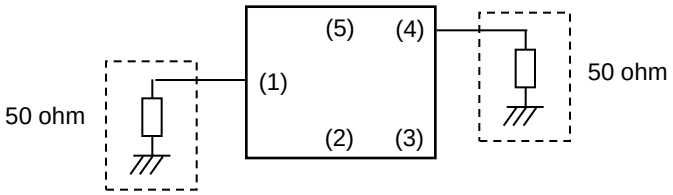
Unit : mm

: Electrode

Measurement Circuit Information

Unbalance Output

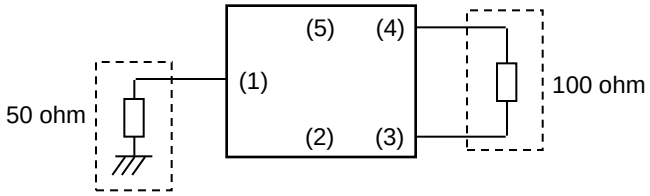
(Top View)



Pin No.	Function
(1)	Input
(2)	GND
(3)	GND
(4)	Output
(5)	GND

Balance Output

(Top View)



Pin No.	Function
(1)	Input
(2)	GND
(3)	Output
(4)	Output
(5)	GND

GPS SAW Filter

Type Name

SF14-1575F5UUA1

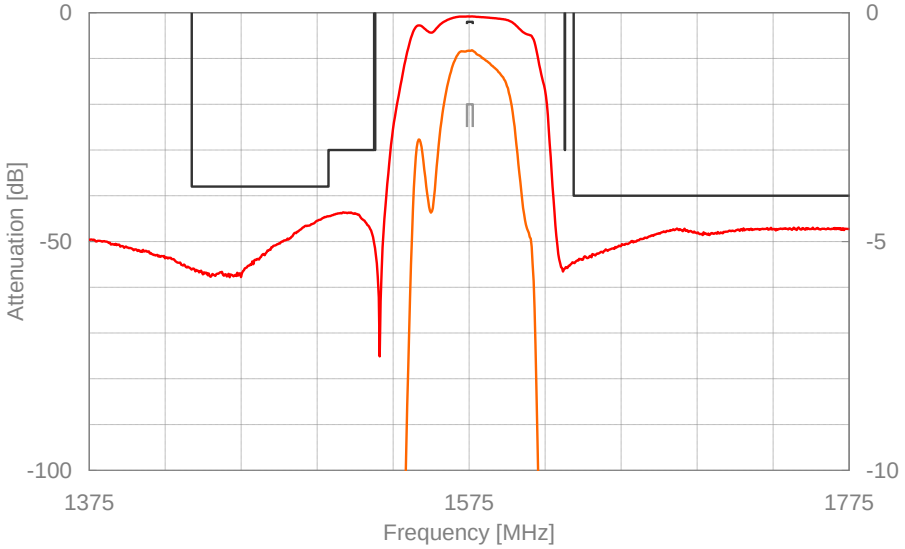
Feature

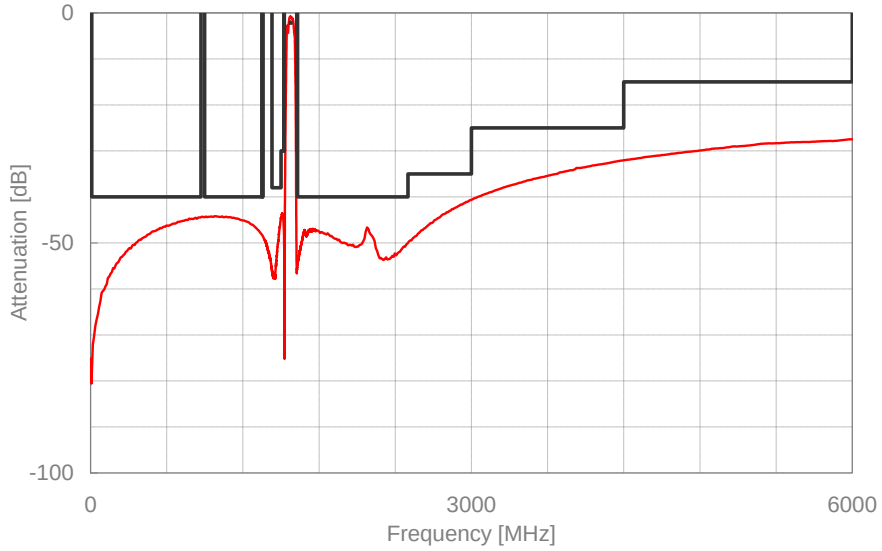
- Low Insertion Loss
- High Attenuation @ Tx Band of Mobile Phone

Specifications

Items	Frequency [MHz]			Specification min.	Specification typ.	Specification max.	Unit
Nominal Center Frequency					1575.42		MHz
Insertion Loss	1573.92	to	1576.92	-	0.8	1.2	dB
Ripple (peak to peak)	1573.92	to	1576.92	-	0.02	0.6	dB
Input VSWR	1573.92	to	1576.92	-	1.1	1.7	-
Output VSWR	1573.92	to	1576.92	-	1.0	1.7	-
Absolute Attenuation	10	to	843	40	45	-	dB
	843	to	870	40	44	-	dB
	898	to	925	40	44	-	dB
	925	to	1350	40	44	-	dB
	1355.25			40	49	-	dB
	1429	to	1501	38	44	-	dB
	1501	to	1525	30	44	-	dB
	1525.42			30	49	-	dB
	1625.42			30	56	-	dB
	1630	to	1893	40	47	-	dB
	1893	to	1920	40	48	-	dB
	1920	to	1940	40	49	-	dB
	1940	to	1980	40	49	-	dB
	1980	to	2500	40	47	-	dB
	2500	to	3000	35	41	-	dB
	3000	to	4200	25	32	-	dB
	4200	to	6000	15	27	-	dB

Typical Curve Data





GPS SAW Filter

Type Name

SF14-1575F5UUC1

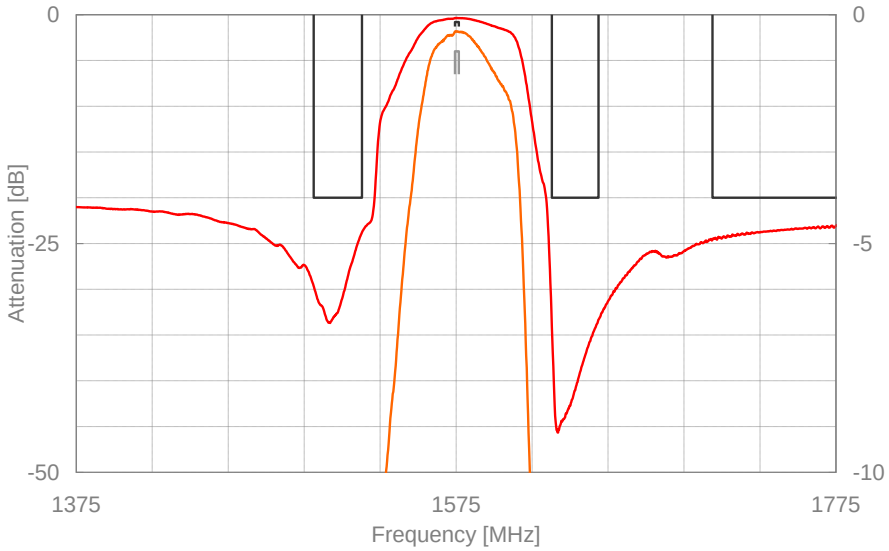
Feature

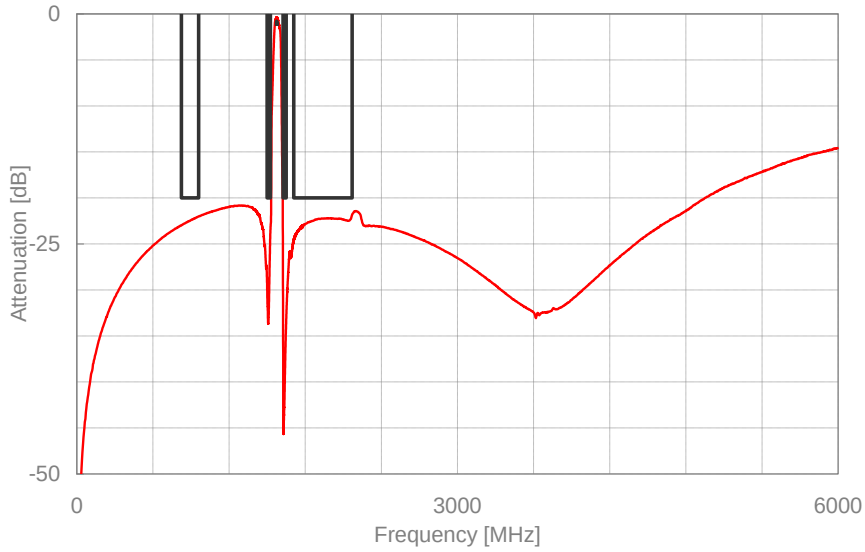
- Ultra Low Insertion Loss

Specifications

Items	Frequency [MHz]			Specification min.	Specification typ.	Specification max.	Unit
Nominal Center Frequency					1575.42		MHz
Insertion Loss	1574.42	to	1576.42	-	0.45	0.8	dB
Ripple (peak to peak)	1574.42	to	1576.42	-	0.1	0.6	dB
Input VSWR	1574.42	to	1576.42	-	1.0	1.8	-
Output VSWR	1574.42	to	1576.42	-	1.0	1.8	-
Absolute Attenuation	824	to	960	20	22	-	dB
	1500	to	1525.42	20	24	-	dB
	1625.42	to	1650	20	34	-	dB
	1710	to	2170	20	22	-	dB

Typical Curve Data





GPS SAW Filter

Type Name

SF14-1575M5UBA1

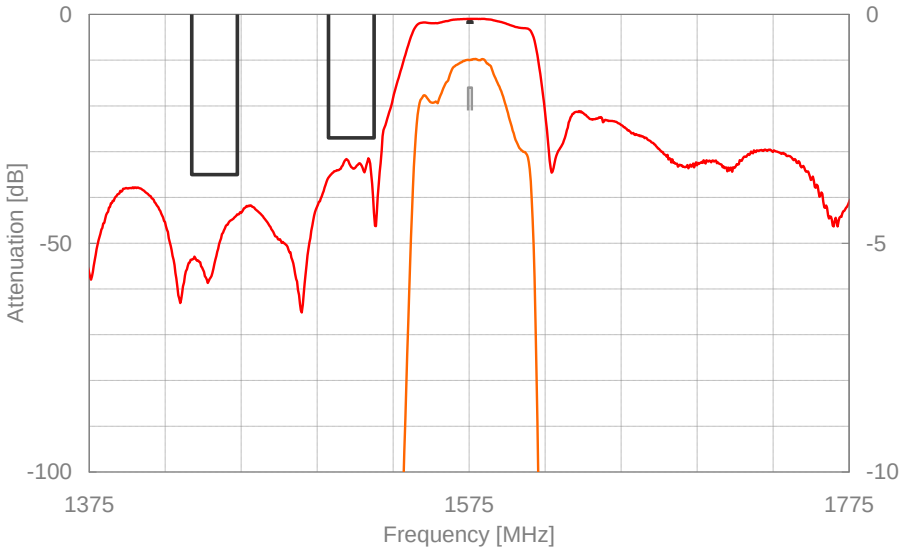
Feature

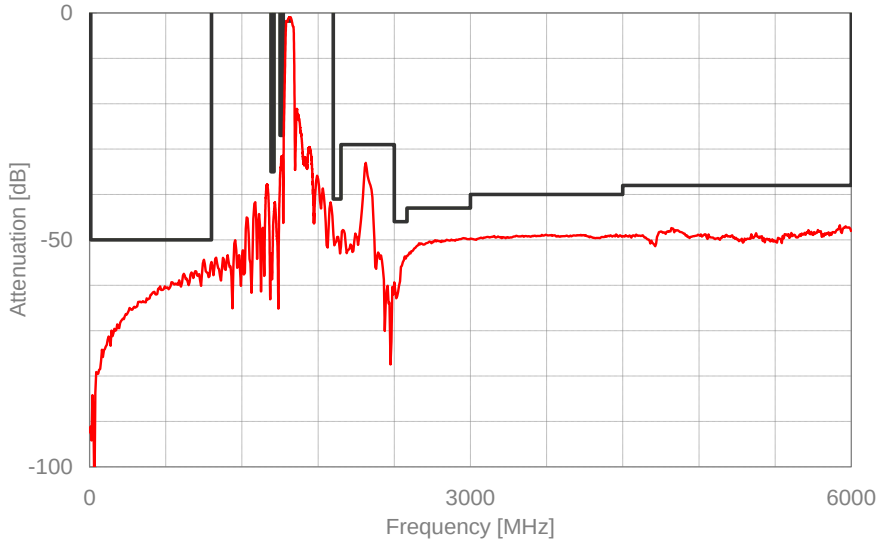
- Low Insertion Loss
- High Attenuation @ Tx Band of Mobile Phone

Specifications

	Frequency Range (MHz)			Specification			Unit
				min.	typ.	max.	
Nominal Frequency	-			1575.42			MHz
Insertion Loss	1574.42	to	1576.42	-	1.1	1.6	dB
Amplitude Ripple(P-P)	1574.42	to	1576.42	-	0.01	1.0	dB
Input VSWR	1574.42	to	1576.42	-	1.1	1.6	-
Output VSWR	1574.42	to	1576.42	-	1.1	1.6	-
Absolute Attenuation	10	to	810	50	57	-	dB
	810	to	960	50	55	-	dB
	1429	to	1453	35	44	-	dB
	1501	to	1525	27	32	-	dB
	1920	to	1980	41	49	-	dB
	1980	to	2400	29	33	-	dB
	2400	to	2500	46	54	-	dB
	2500	to	3000	43	50	-	dB
	3000	to	4200	40	49	-	dB
	4200	to	6000	38	47	-	dB
Amplitude Imbalance	1574.42	to	1576.42	-1.4	0.3	+1.4	dB
Phase Imbalance	1574.42	to	1576.42	-8.0	2.0	+8.0	deg.

Typical Curve Data





GPS SAW Filter

Type Name

SF14-1575M5UBB1

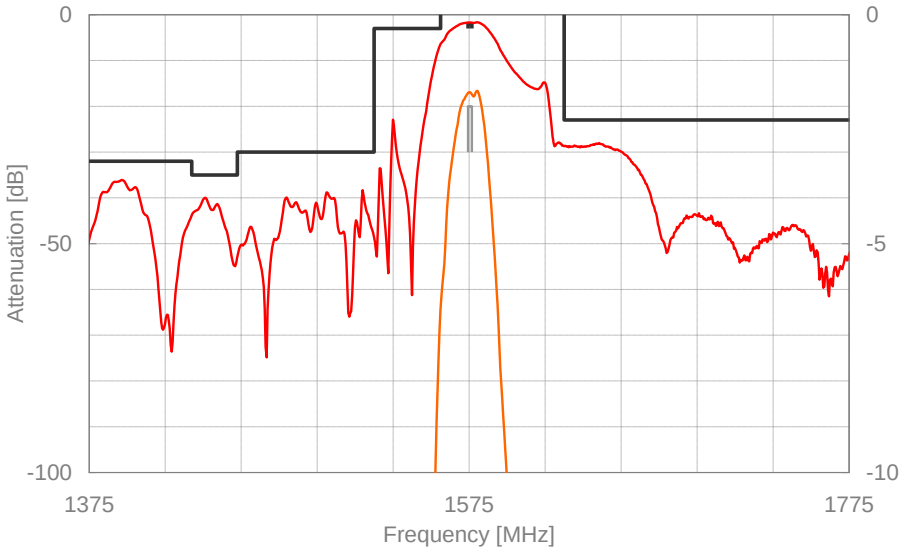
Feature

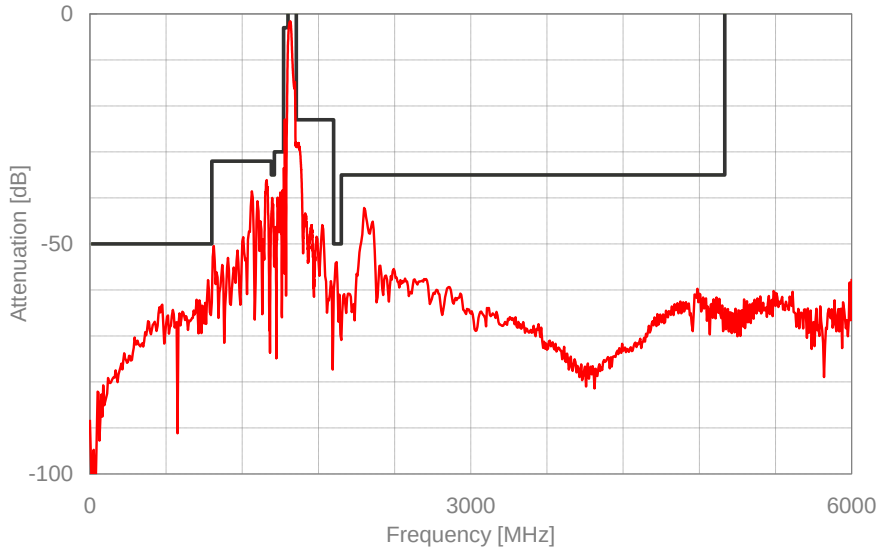
- High Attenuation @ Tx Band of Mobile Phone

Specifications

	Frequency Range (MHz)			Specification			Unit
				min.	typ.	max.	
Nominal Frequency	-				1575.42		MHz
Insertion Loss	1574.42	to	1576.42	-	1.7	2.0	dB
Amplitude Ripple(P-P)	1574.42	to	1576.42	-	0.05	1.0	dB
Input VSWR	1574.42	to	1576.42	-	1.3	1.8	-
Output VSWR	1574.42	to	1576.42	-	1.1	1.8	-
Absolute Attenuation	10	to	250	50	76	-	dB
	250	to	810	50	63	-	dB
	810	to	960	50	58	-	dB
	960	to	1429	32	36	-	dB
	1429	to	1453	35	40	-	dB
	1453	to	1525	30	38	-	dB
	1525	to	1560	3	6	-	dB
	1625	to	1920	23	28	-	dB
	1920	to	1980	50	54	-	dB
	1980	to	5000	35	42	-	dB
Amplitude Imbalance	1574.42	to	1576.42	-1.8	-0.6	+1.8	dB
Phase Imbalance	1574.42	to	1576.42	-11	-4.5	+11	deg.

Typical Curve Data





GPS/GLONASS/COMPASS SAW Filter

Type Name

SF14-1582M5UUD2

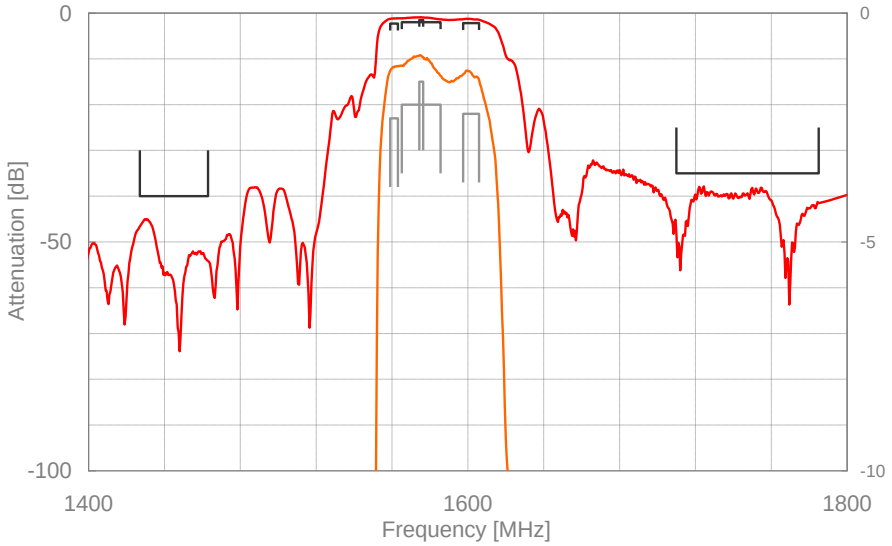
Feature

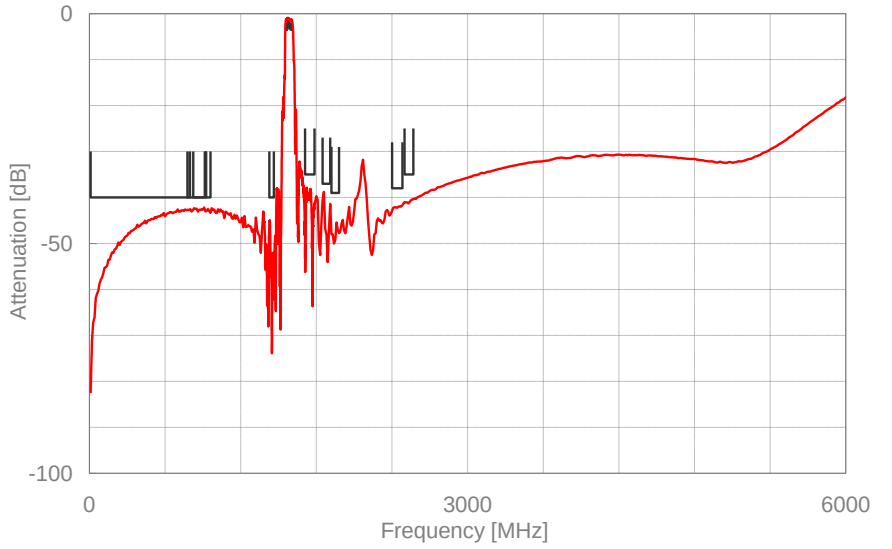
- Multi-GNSS SAW Filter
- Low Insertion Loss

Specifications

Items	Frequency [MHz]			Tentative Specification min.	typ.	max.	Unit
Nominal Center Frequency	-				1582		MHz
Insertion Loss	1574.39	to	1576.45	-	0.9	1.5	dB
	1565.19	to	1585.65	-	1.2	2.0	dB
	1559.05	to	1563.15	-	1.2	2.3	dB
	1597.55	to	1605.89	-	1.4	2.2	dB
Group Delay Ripple	1597.55	to	1605.89	-	5.5	15	ns
Input VSWR	1574.39	to	1576.45	-	1.2	2.0	-
	1565.19	to	1585.65	-	1.7	2.0	-
	1559.05	to	1563.15	-	1.3	2.2	-
	1597.55	to	1605.89	-	1.5	2.0	-
Output VSWR	1574.39	to	1576.45	-	1.2	2.0	-
	1565.19	to	1585.65	-	1.7	2.0	-
	1559.05	to	1563.15	-	1.3	2.3	-
	1597.55	to	1605.89	-	1.6	2.0	-
Absolute Attenuation	777	to	798	40	42	-	dB
	824	to	915	40	42	-	dB
	10	to	925	40	42	-	dB
	925	to	960	40	42	-	dB
	1427	to	1463	40	45	-	dB
	1710	to	1785	35	37	-	dB
	1850	to	1910	37	39	-	dB
	1920	to	1980	39	45	-	dB
	2401	to	2483	38	42	-	dB
	2500	to	2570	35	40	-	dB
700MHz harmonic	Input : 15dBm at 787.76MHz Measure : second harmonic at 1575.52MHz			-	-77	-73	dBm

Typical Curve Data





GPS SAW Filter

Type Name

SF14-1575M5UBA2

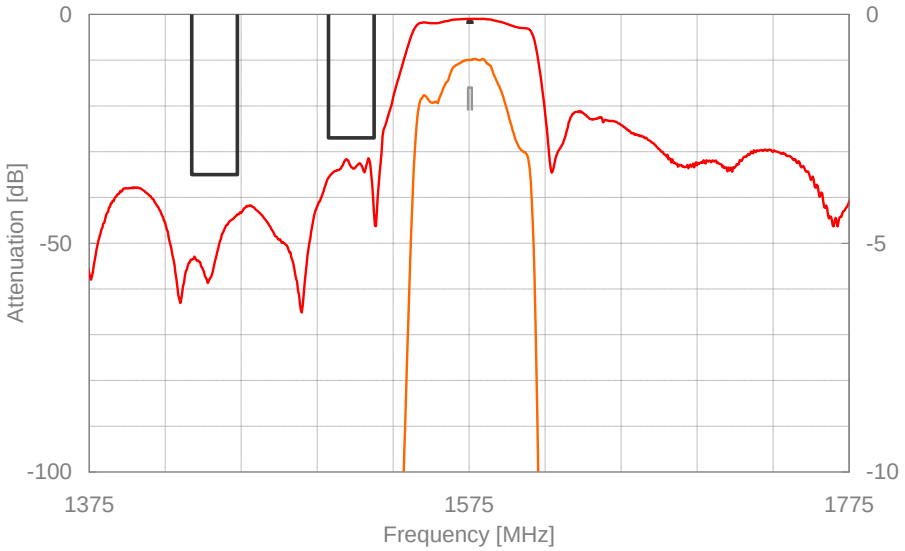
Feature

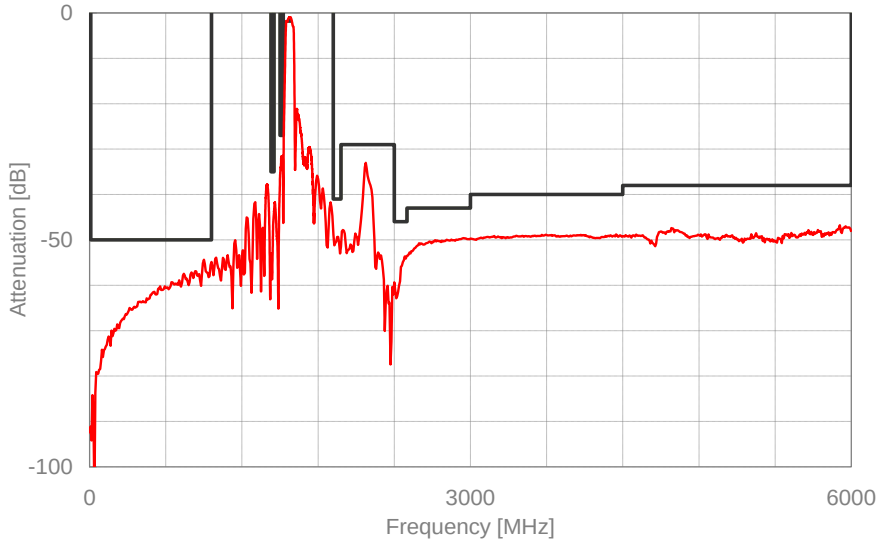
- Low Insertion Loss
- High Attenuation @ Tx Band of Mobile Phone
- Operating Temp. Range : -40 to +85 deg. C

Specifications

	Frequency Range (MHz)			Specification			Unit
				min.	typ.	max.	
Nominal Frequency	-				1575.42		MHz
Insertion Loss	1574.42	to	1576.42	-	1.1	1.6	dB
Amplitude Ripple(P-P)	1574.42	to	1576.42	-	0.01	1.0	dB
Input VSWR	1574.42	to	1576.42	-	1.1	1.7	-
Output VSWR	1574.42	to	1576.42	-	1.1	1.7	-
Absolute Attenuation	10	to	810	50	57	-	dB
	810	to	960	50	55	-	dB
	1429	to	1453	35	44	-	dB
	1501	to	1525	27	32	-	dB
	1920	to	1980	41	49	-	dB
	1980	to	2400	29	33	-	dB
	2400	to	2500	46	54	-	dB
	2500	to	3000	43	50	-	dB
	3000	to	4200	40	49	-	dB
	4200	to	6000	38	47	-	dB
Amplitude Imbalance	1574.42	to	1576.42	-1.4	0.3	+1.4	dB
Phase Imbalance	1574.42	to	1576.42	-8.0	2.0	+8.0	deg.

Typical Curve Data





GPS SAW Filter

Type Name

SF14-1575F5UUA7

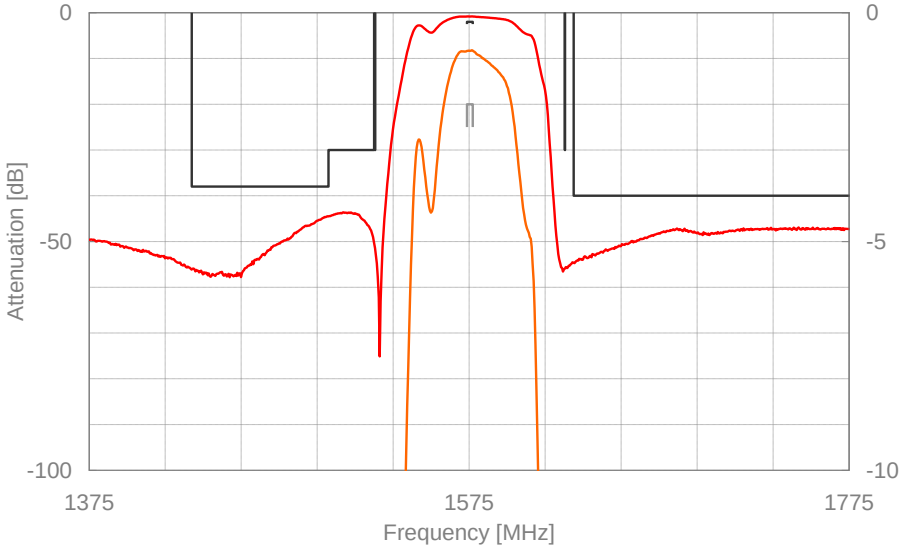
Feature

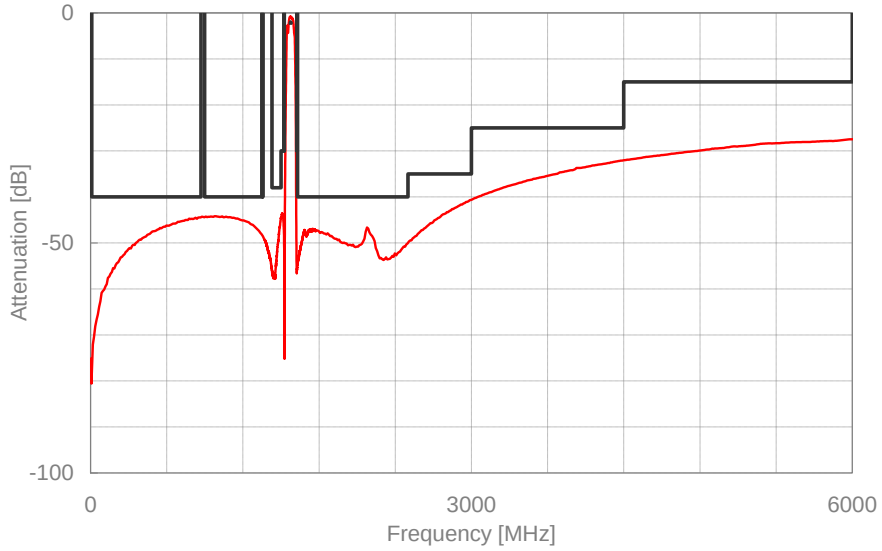
- Low Insertion Loss
- High Attenuation @ Tx Band of Mobile Phone
- Operating Temp. Range : -40 to +85 deg. C

Specifications

Items	Frequency [MHz]			Specification min.	Specification typ.	Specification max.	Unit
Nominal Center Frequency					1575.42		MHz
Insertion Loss	1573.92	to	1576.92	-	0.8	1.2	dB
Ripple (peak to peak)	1573.92	to	1576.92	-	0.02	0.6	dB
Input VSWR	1573.92	to	1576.92	-	1.1	1.7	-
Output VSWR	1573.92	to	1576.92	-	1.0	1.7	-
Absolute Attenuation	10	to	843	40	45	-	dB
	843	to	870	40	44	-	dB
	898	to	925	40	44	-	dB
	925	to	1350	40	44	-	dB
	1355.25			40	49	-	dB
	1429	to	1501	38	44	-	dB
	1501	to	1525	30	44	-	dB
	1525.42			30	49	-	dB
	1625.42			30	56	-	dB
	1630	to	1893	40	47	-	dB
	1893	to	1920	40	48	-	dB
	1920	to	1940	40	49	-	dB
	1940	to	1980	40	49	-	dB
	1980	to	2500	40	47	-	dB
	2500	to	3000	35	41	-	dB
	3000	to	4200	25	32	-	dB
	4200	to	6000	15	27	-	dB

Typical Curve Data





GPS/GLONASS/COMPASS SAW Filter

Type Name

SF14-1582M5UUD1

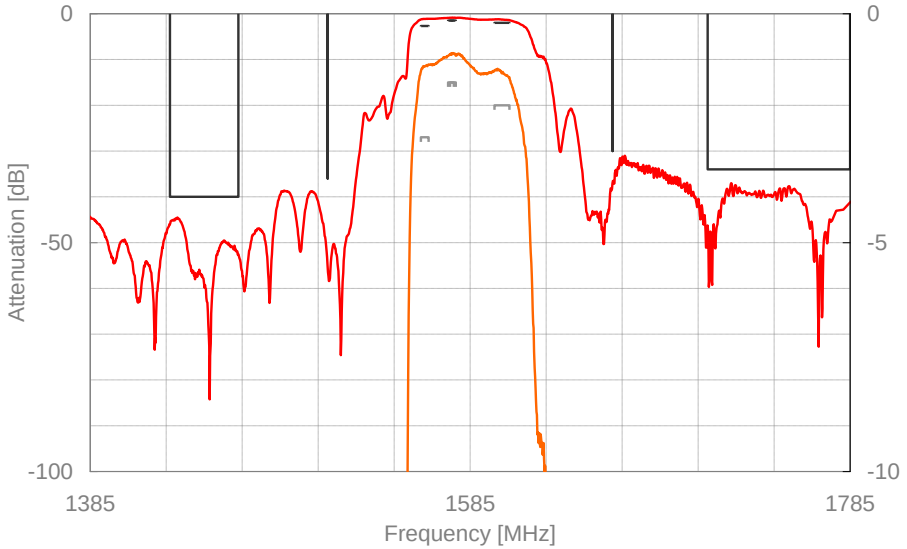
Feature

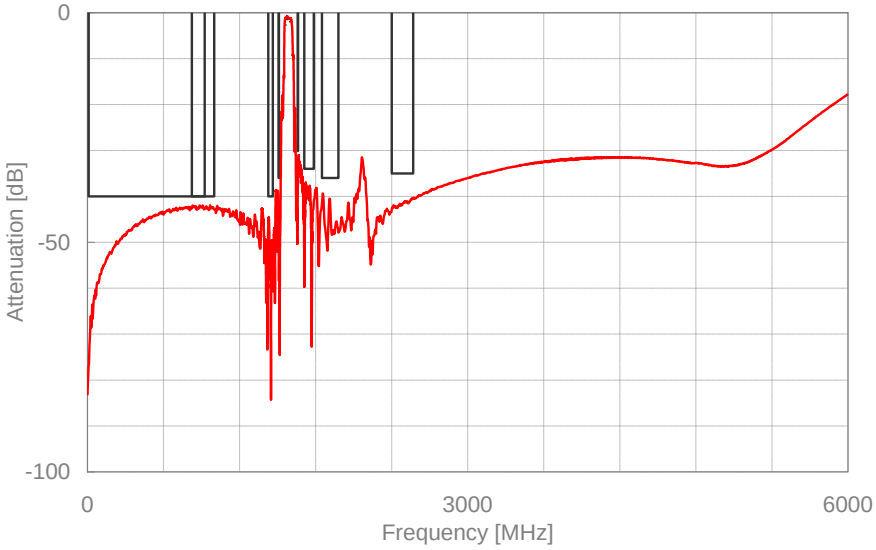
- Low Insertion Loss
- Operating Temp. Range : -40 to +85 deg. C

Specifications

Items	Frequency [MHz]			Specification min.	typ.	max.	Unit	Note
Nominal Center Frequency	-				1582		MHz	
Insertion Loss	1574.39	to	1576.45	-	0.9	1.5	dB	
	1597.78	to	1605.66	-	1.4	2.0	dB	
	1559.05	to	1563.15	-	1.4	2.8	dB	-40 to +85℃
						2.7	dB	
	1573.37	to	1577.47	-	0.9	1.5	dB	
Input VSWR	1574.39	to	1576.45	-	1.2	1.8	-	
	1597.78	to	1605.66		1.5	2.0	-	
	1559.05	to	1563.15		1.4	2.2	-	
	1573.37	to	1577.47		1.3	1.8	-	
Output VSWR	1574.39	to	1576.45	-	1.2	1.8	-	
	1597.78	to	1605.66		1.6	2.0	-	
	1559.05	to	1563.15		1.3	2.3	-	
	1573.37	to	1577.47		1.3	1.8	-	
Absolute Attenuation	10	to	1000	40	42	-	dB	
	824	to	925	40	42	-	dB	
	1427	to	1463	40	45	-	dB	
	1510			36	49	-	dB	
	1660			30	37	-	dB	
	1710	to	1785	34	37	-	dB	
	1850	to	1980	36	39	-	dB	
	2400	to	2570	35	40	-	dB	

Typical Curve Data





WLAN/Bluetooth SAW Filter

Type Name

SF14-2446M5UUA3

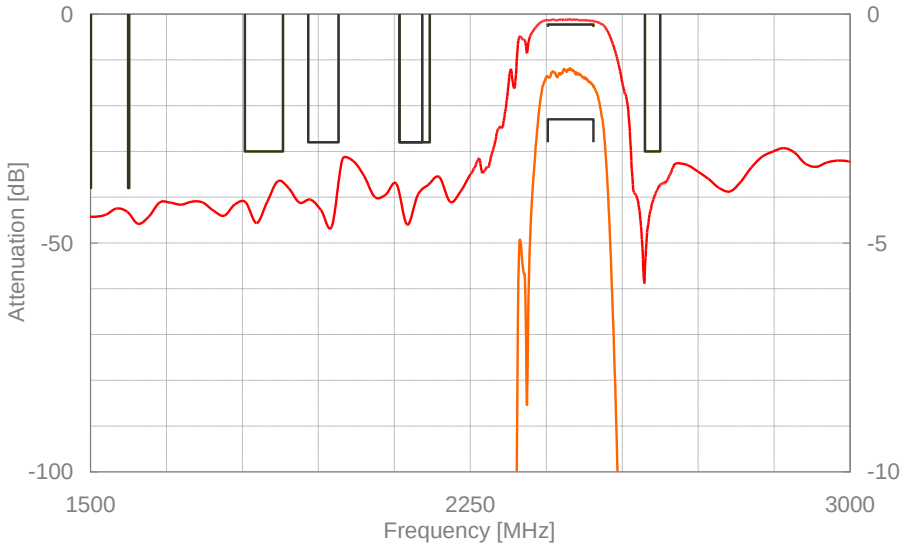
Feature

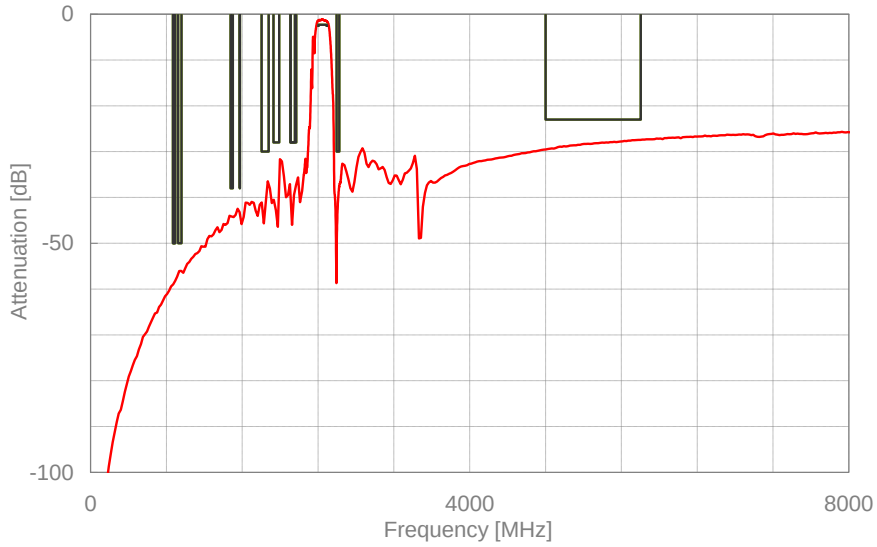
- Low Insertion Loss

Specifications

Items	Frequency (MHz)			Specification			Unit
				min.	typ.	max.	
Insertion Loss	2400	to	2493	-	1.5	2.3	dB
Ripple	2400	to	2493	-	0.3	1.4	dB
Input VSWR	2400	to	2493	-	1.3	2.1	-
Output VSWR	2400	to	2493	-	1.3	2.1	-
Absolute Attenuation	875	to	885	50	59	-	dB
	869	to	894	50	58	-	dB
	925	to	960	50	56	-	dB
	1477	to	1501	38	44	-	dB
	1574.42	to	1576.42	38	44	-	dB
	1805	to	1880	30	37	-	dB
	1930	to	1990	28	33	-	dB
	2110	to	2155	28	38	-	dB
	2110	to	2170	28	36	-	dB
	2595	to	2625	30	39	-	dB
	4800	to	5805	23	27	-	dB
Input Impedance					50//2.7nH		ohm
Output Impedance					50//2.7nH		ohm

Typical Curve Data





THE NEW VALUE FRONTIER

KYOCERA Corporation

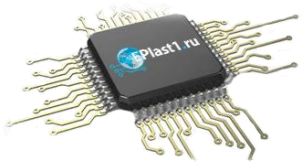
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.