

MBFxxxx

SAW Filters for Mobile and Portable Telephones

DESCRIPTION

SAW (Surface Acoustic Wave) filters are used in various radio equipment and telecommunication systems operating in the 800-MHz to 2-GHz frequency range. Due to their small size, light weight and low insertion loss, they are especially suited for use in high-volume mobile and portable telephones.

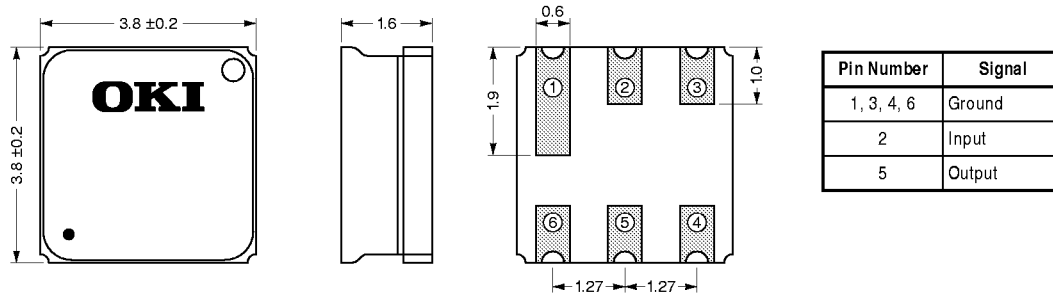
FEATURES

- Low insertion loss
- Small size, light weight
- 50 Ω matched
- SMD packaging
- High reliability

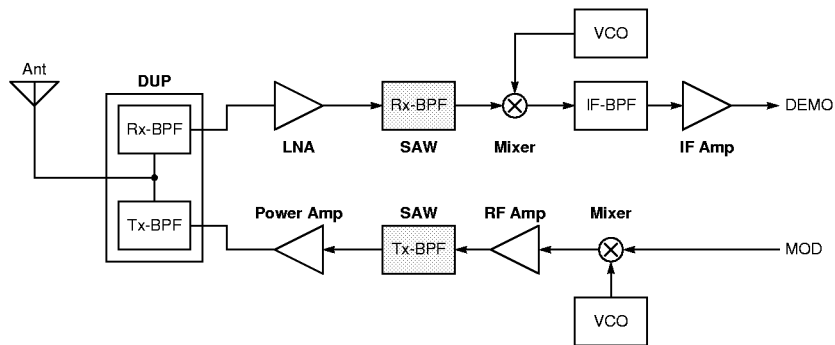
Standard Product List

Part Number	Description	Frequency MHz	Application
MBF9301	Transmitting filter	824 ~ 849	TDMA, CDMA, AMPS
MBF9305	Receiving filter	869 ~ 894	TDMA, CDMA, AMPS
MBF9321	Transmitting filter	890 ~ 915	GSM
MBF9323	Receiving filter	935 ~ 960	GSM
MBF9332	Receiving filter	917 ~ 950	ETACS

PIN CONFIGURATION



BLOCK DIAGRAM



ELECTRICAL CHARACTERISTICS

MBF9301 Electrical Characteristics (-30 ~ +85 °C)

Parameter	Frequency (MHz)	Min	Max	Units
Center Frequency (F_0)	836.5	—	—	MHz
Bandwidth (BW)	$F_0 \pm 12.5$	—	—	MHz
Insertion Loss across BW	824 ~ 849	—	3.5	dB
Ripple across BW		—	2.0	dB
VSWR across BW		—	2.5	—
Stop Band Attenuation	500 ~ 800	20	—	dB
	869 ~ 894	20	—	dB
	894 ~ 1049	25	—	dB
	1049 ~ 1500	15	—	dB
Terminating Impedance	—	—	50	Ohms

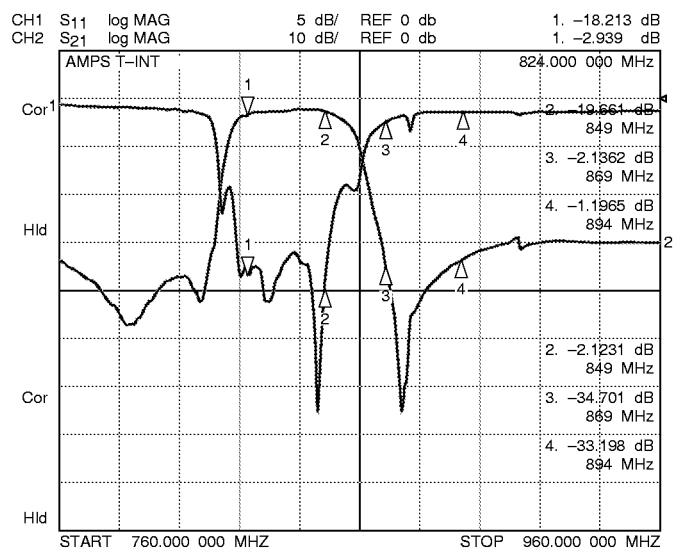


Figure 1. MBF9301 Frequency Response

MBF9305 Electrical Characteristics (-30 ~ +85 °C)

Parameter	Frequency (MHz)	Min	Max	Units
Center Frequency (F_0)	881.5	—	—	MHz
Bandwidth (BW)	$F_0 \pm 12.5$	—	—	MHz
Insertion Loss across BW	869 ~ 894	—	4.0	dB
Ripple across BW		—	2.0	dB
VSWR across BW		—	2.5	—
Stop Band Attenuation	500 ~ 824	25	—	dB
	824 ~ 849	20	—	dB
	914 ~ 939	20	—	dB
	939 ~ 1049	30	—	dB
	1049 ~ 1500	20	—	dB
Terminating Impedance		—	50	Ohms

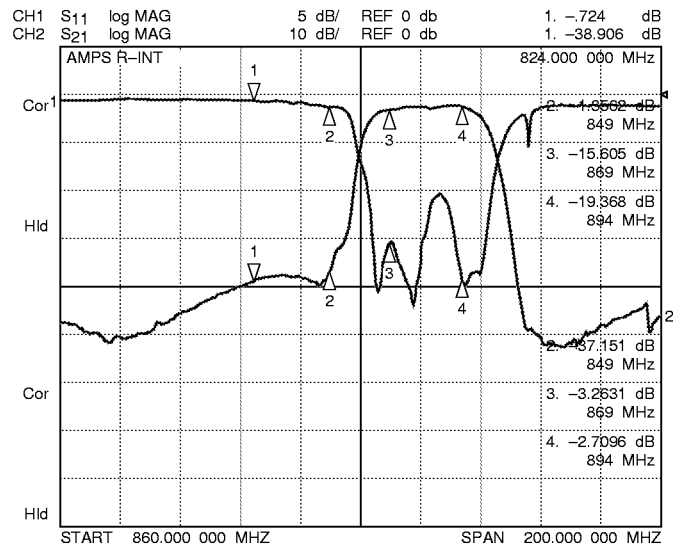


Figure 2. MBF9305 Frequency Response

MBF9321 Electrical Characteristics (-30 ~ +85 °C)

Parameter	Frequency (MHz)	Min	Max	Units
Center Frequency (F_0)	902.5	—	—	MHz
Bandwidth (BW)	$F_0 \pm 12.5$	—	—	MHz
Insertion Loss across BW	890 ~ 915	—	3.5	dB
Ripple across BW		—	2.0	dB
VSWR across BW		—	2.5	—
Stop Band Attenuation	500 ~ 870	20	—	dB
	935 ~ 980	20	—	dB
	980 ~ 1100	26	—	dB
	1100 ~ 1500	15	—	dB
Terminating Impedance	—	—	50	Ohms

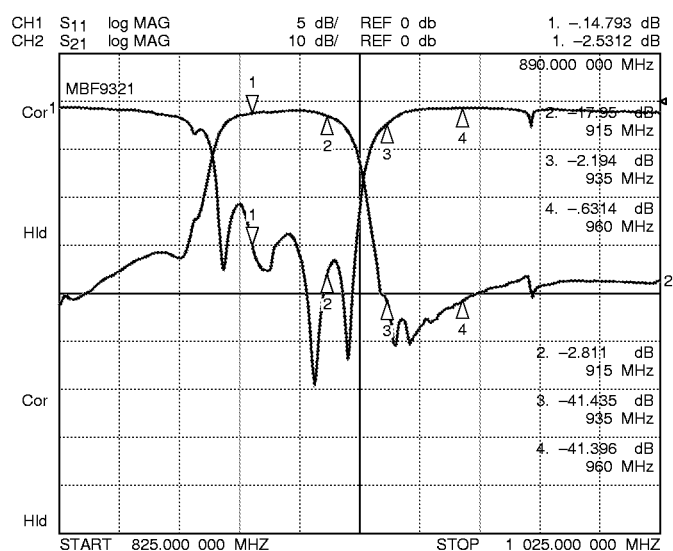


Figure 3. MBF9321 Frequency Response

MBF9323 Electrical Characteristics (-30 ~ +85 °C)

Parameter	Frequency (MHz)	Min	Max	Units
Center Frequency (F_0)	947.5	—	—	MHz
Bandwidth (BW)	$F_0 \pm 12.5$	—	—	MHz
Insertion Loss across BW	935 ~ 960	—	4.0	dB
Ripple across BW		—	2.0	dB
VSWR across BW		—	2.5	—
Stop Band Attenuation	500 ~ 870	30	—	dB
	890 ~ 915	20	—	dB
	980 ~ 1025	15	—	dB
	1025 ~ 1070	33	—	dB
	1070 ~ 1105	30	—	dB
	1105 ~ 1500	20	—	dB
Terminating Impedance	—	—	50	Ohms

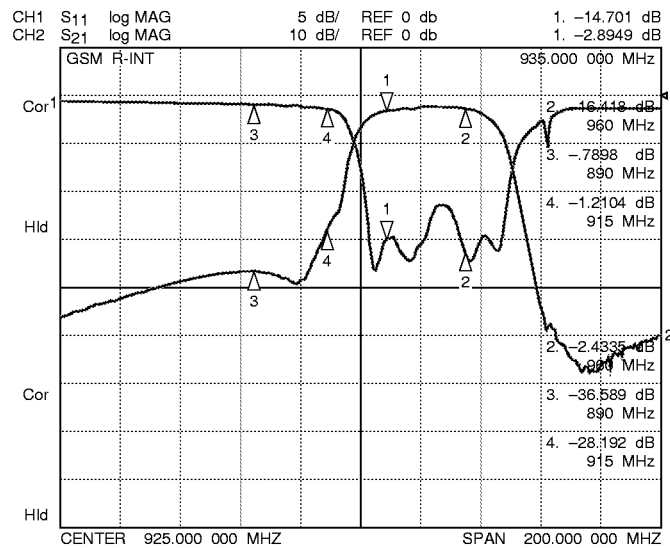


Figure 4. MBF9323 Frequency Response

MBF9332 Electrical Characteristics (-30 ~ +85 °C)

Parameter	Frequency (MHz)	Min	Max	Units
Center Frequency (F_0)	933.5	—	—	MHz
Bandwidth (BW)	$F_t \pm 16.5$	—	—	MHz
Insertion Loss across BW	917 ~ 950	—	5.5	dB
Ripple across BW		—	2.0	dB
VSWR across BW		—	2.5	—
Stop Band Attenuation	872 ~ 900	25	—	dB
	900 ~ 905	10	—	dB
	1007 ~ 1040	30	—	dB
	1040 ~ 2000	20	—	dB
Terminating Impedance	—	—	50	Ohms

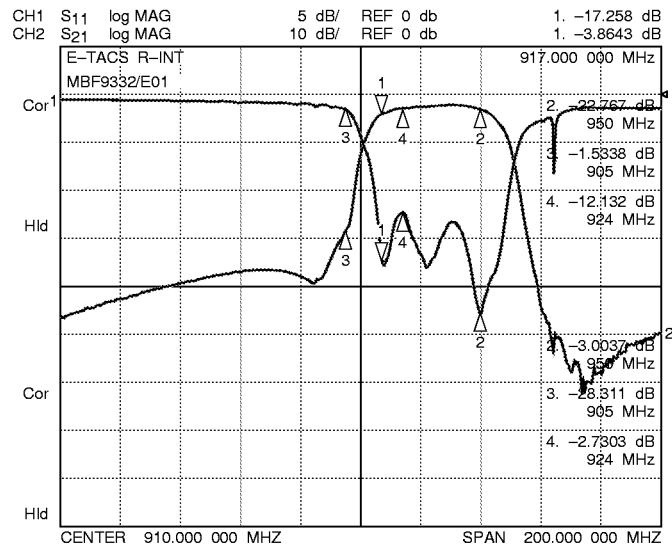


Figure 5. MBF9332 Frequency Response