

MCV high performance cavity and DR loaded cavity filters, duplexers, triplexers and multiplexers are designed and manufactured using proprietary ultra-high Q dielectric resonator materials in variety of topologies. We provide custom filters and quick-turn delivery. Our cavity products are widely used in commercial wireless, public safety and high reliability defense and mm-wave communication equipment.

APPLICATIONS

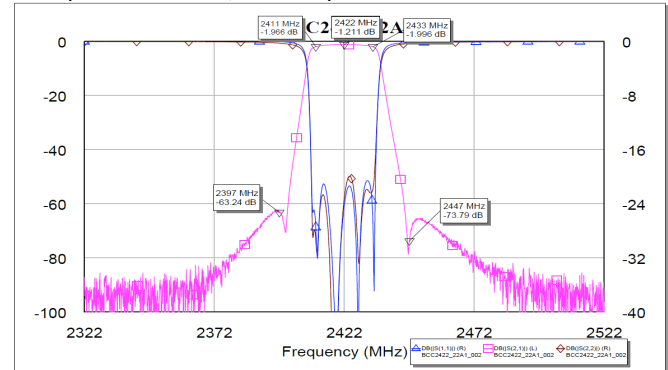
- AMPS/DCS/PCS
- CDMA/WCDMA/LTE
- DBS/DVB-T
- GPS(L1, L2 and L5 Bands)
- GSM
- ISM(915MHz, 2.4GHz, 5.8GHz, 24GHz)
- SATCOM
- WiFi/WiMAX/WLL
- UHF/VHF/700/800

FEATURES

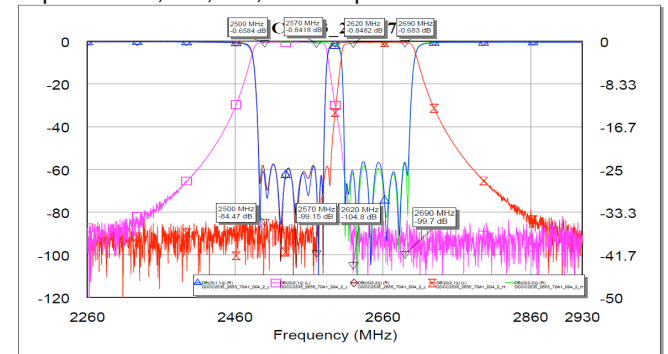
- Bandpass and band reject filters
- Bandwidth from 0.25% to 75%
- Frequency range from 10MHz to 40 GHz
- High Q – low insertion loss
- Dielectric Resonator, DR loaded cavity filter
- Filters, duplexers, triplexers, multiplexers and MIMO design
- High power / low PIM
- Custom electrical and packaging available

SELECTED RESPONSES

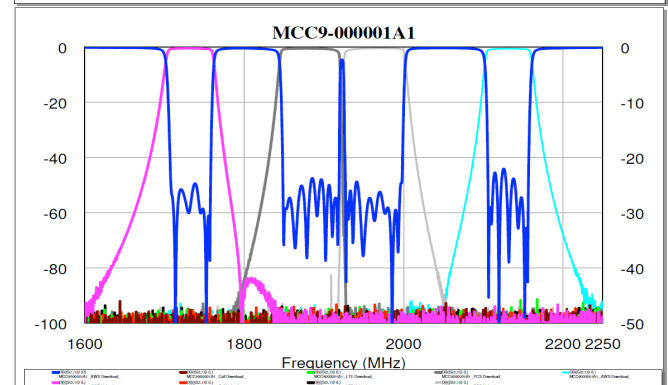
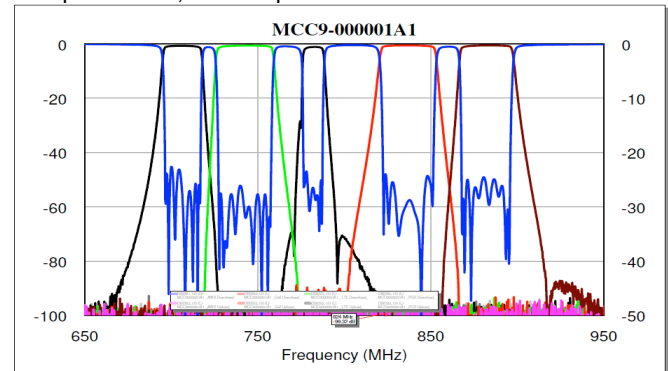
Bandpass Filter S11,S21 Response



Duplexer S11,S21,S22,S33 Response



Multiplexer S11,S21 Response



SELECTED SPECIFICATIONS

Bandpass/Dual Bandpass Filters

Part Number	Frequency Range (MHz)	I.L. (dB) Max	Ripple (dB)	VSWR Max	Attenuation (dB) Min@ MHz
BCC608-60A1	578~638	1.0	0.5	1.22:1	50@Fc±70
BCC1200-20A1	1190~1210	1.0	0.5	1.22:1	80@1165,1235
BCC2033-9A1	2028.7~2037.7	1.5	0.5	1.22:1	60@DC~1973 60@2093~4000
BCC2437-8A1	2433~2441	3.0	1.0	1.22:1	30@2417,2415
BCC5250-100A1	5200~5300	2.0	0.5	1.22:1	70dB@5825
BCC5730-10A1	5725~5735	1.2	0.6	1.22:1	85@Fc±100~200
BCC17200-300A1	17050~17350	1.0	0.5	1.22:1	60@16440,17960
DBCC780-942-4535A1	758~803,925~960	1.0	0.7	1.22:1	30@703~748 30@880~915
DBCC1756-1970-20A1	1746.7~1766.7 1960~1980	1.0	0.5	1.22:1	45@1842~1862 30@2170~12750

Band Reject Filters

Part Number	PB Frequency Range (MHz)	I.L. (dB) Max	Ripple (dB)	VSWR Max	Attenuation (dB) Min@ MHz
RCC772-4A1	776~787	1.0	1.0	1.22:1	15dBc@770~774
RCC1175-26A1	500~1100,1250~2000	0.4	0.3	1.22:1	50@1163~1189
RCC1575-15A1	1428~1452	0.5	0.35	1.22:1	50@1568~ 1583
RCC13500-1000A1	8~12.05,14.9~20GHz	1.5	0.5	1.22:1	30@13~ 14GHz
RCC17500-1000A1	8~15.95,18.95~20GHz	1.5	0.5	1.22:1	30@17~ 18GHz

Duplexers/Dual Duplexers

Part Number	Frequency Range (MHz)	I.L. (dB) Max	Ripple (dB)	VSWR Max	Attenuation (dB) Min@ MHz
DCC710-740-12A1	704~716	1.5	0.5	1.22:1	80@ 734~746
	734~746				80@ 704~716
DCC902-947-25A1	890~915	1.0	0.7	1.22:1	55@ 935~960
	935~960				55@ 890~915
DCC1030-1090-15A1	1022.5~1037.5	0.5	0.2	1.22:1	40@1090,20@1000
	1074.5~1105.5				70@1030,70@1150
DCC1747-1842-75B1	1710~1785	1.0	0.5	1.22:1	90@1805 ~1880
	1805~1880				90@1710 ~1785
DCC1950-2140-20A1	1940~1960	1.2	0.5	1.22:1	80dBc@2130~2150
	2130~2150				80dBc@1940~1960
DDCC2535-2655-70A1	2500~2570	1.0	0.5	1.22:1	90@ 2620~ 2690
	2620~2690				90@ 2500~ 2570
DCC21370-22584-340A1	21200~21540	1.5	0.75	1.22:1	65@22432~22736
	22432~22736				65@21200~21540

Multiplexers/DR Loaded Multiplexers

Part Number	Frequency Range (MHz)	I.L. (dB) Max	Ripple (dB)	VSWR Max	Attenuation (dB) Min @ MHz
MCC3-000001A1	824~894	0.3	0.15	1.22:1	55@1920~2170&2630~2655
	1920~2170	0.3	0.15	1.22:1	55@824~894& 2630~2655
	2630~2655	0.3	0.15	1.22:1	55@824~894&1920~2170
MCCD4-000002A1	1870~1875	0.5	-	1.22:1	20@1880~1990
	1950~1965	0.5	-	1.22:1	20@1870~1910, 1970~1990
	1880~1910	0.5	-	1.22:1	20@1870~1875, 1970~1990
	1970~1990	0.5	-	1.22:1	20@1870~1965
MCC9-000001A1	824~849	1.5	1.2	1.22:1	80@700~800,100@869~894,80@900~2200
	869~894	1.5	1.2	1.22:1	80@700~800,100@824~849,80@920~2200
	1850~1915	1.5	1.2	1.22:1	80@700~1760,100@1930~1995,80@2000~2200
	1930~1995	1.5	1.2	1.22:1	80@700~1760,100@1850~1915,80@2060~2200
	1710~1755	1.5	1.2	1.22:1	80@700~1500,80@1800~2000,100@2110~2155
	2110~2155	1.5	1.2	1.22:1	80@700~1500,100@1710~1755,80@1800~2000
	698~716	1.5	1.2	1.22:1	100@728~757,25@763~775,80@820~2200
	777~787	1.5	1.2	1.22:1	100@728~757,25@763~775,80@820~2200
	728~757	1.5	1.2	1.22:1	100@698~716,100@777~787,80@820~2200

Duplexer Couplers/Hybrid Couplers

Part Number	Frequency Range (MHz)	I.L. (dB) Max	Ripple (dB)	VSWR Max	Attenuation (dB) Min @ MHz	
MCCH4-000001A1	1870~1875	3.5	-	1.22:1	Port1	Isolation: 20min @ Port1 & Port2
	1950~1965	3.5	-	1.22:1	Port2	
	1875~1910	3.5	-	1.22:1		
	1965~1990	3.5	-	1.22:1		
HCCC1699-2002A1	698~2700	3.0±0.7	-	1.22:1	Directivity:20dB min	

ORDERING INFORMATION

Bandpass/Band Reject Filters

<u>BCC</u>	<u>1500-</u>	<u>500</u>	<u>A1</u>
Filter Type	Centre Frequency (MHz)	Bandwidth (MHz)	Revision
BCC = Bandpass connectorized cavity filter			
BSC = Bandpass surface mount cavity filter			
RCC = Band reject connectorized cavity filter			
RSC = Band reject surface mount cavity filter			
DBCC = Dual band bandpass connectorized cavity filter			
DRCC = Dual band band-reject connectorized cavity filter			
BCCD = DR loaded bandpass connectorized cavity filter			

Duplexers

<u>DCC</u>	<u>2500-</u>	<u>2650-</u>	<u>20</u>	<u>A1</u>
Filter Type	Lower Band Centre Frequency (MHz)	Higher Band Centre Frequency (MHz)	Lower Band Bandwidth (MHz)	Revision
DCC = Connectorized duplexer				
DSC = Surface mount duplexer				
DDCC = Dual connectorized cavity duplexer				
DCCD = DR loaded connectorized cavity duplexer				

Multiplexers

<u>MCC</u>	<u>3-</u>	<u>000006</u>	<u>A1</u>
Filter Type	Port Number	Sequential Number	Revision
MCC = Connectorized multiplexer	3 - Triplexer		
MSC = Surface mount multiplexer	4 - Quadruplexer		
MCCD = DR loaded connectorized cavity multiplexer	5 - Pentaplexer		
		

Multiplexer Couplers

<u>MCCH</u>	<u>4-</u>	<u>000001</u>	<u>A1</u>
Filter Type	Port Number	Sequential Number	Revision
MCCH = Hybrid coupler type connectorized cavity multiplexer	3 - Port		
	4 - Port		
	5 - Port		
		

Hybrid Couplers

<u>HCCC</u>	<u>1699-</u>	<u>2002-</u>	<u>A1</u>
Filter Type	Centre Frequency (MHz)	Bandwidth (MHz)	Revision
HCCC = Connectorized cavity hybrid coupler			