



5G

# 5G INTERFERENCE MITIGATION SOLUTIONS

INNOVATIVE DESIGN

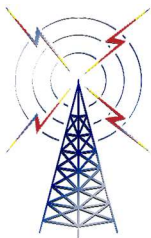
DURABLE ONE-PIECE BODY/FLANGE CONSTRUCTION

DESIGNED AND MANUFACTURED IN THE USA

**MHz**<sup>®</sup>  
**MEGA HERTZ**<sup>®</sup>  
800-883-8839  
go2MHz.com







# MFC

Microwave Filter Company, Inc.

Creating Filters and Components to 50 Ghz for Over 50 Years!

**5G C-BAND BANDPASS FILTER  
MODEL 20541**

Ideal for eliminating interference from 5G and virtually any other potential source of out-of-band interference.

The model 20541 combines innovative design techniques with the solid performance of its renowned predecessors.



### SPECIFICATIONS

**PASSBAND:** 3820–4200 MHz

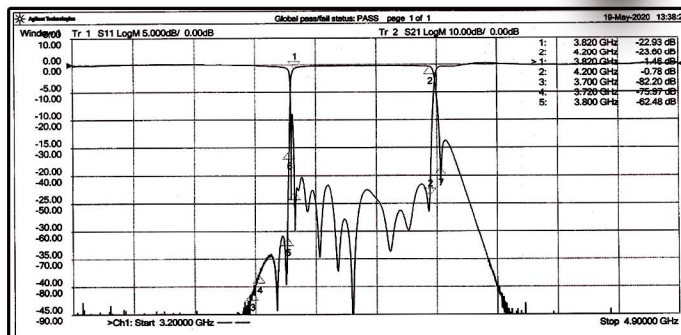
**INSERTION LOSS:**  
 FROM 3820–3825 MHz: 1.4 dB MAX,  $\pm 0.2$  dB  
 FROM 3825–4200 MHz: 1.2 dB MAX,  $\pm 0.2$  dB

**RETURN LOSS:** 20 dB MIN

**GROUP DELAY VARIATION:** 1.45 nSEC TYP  
 $\pm 0.5$  MHz FROM ANY

**REJECTION:**  
 FREQUENCY WITHIN PASSBAND  
 70 dB MIN FROM 3700 MHz TO 3720 MHz  
 60 dB MIN FROM 3720 MHz TO 3800 MHz  
 30 dB MIN FROM 3800 MHz TO 3805 MHz  
 25 dB MIN @ 4230 MHz

**FLANGES:** CPR229G (INPUT)  
 CPR229F (OUTPUT)

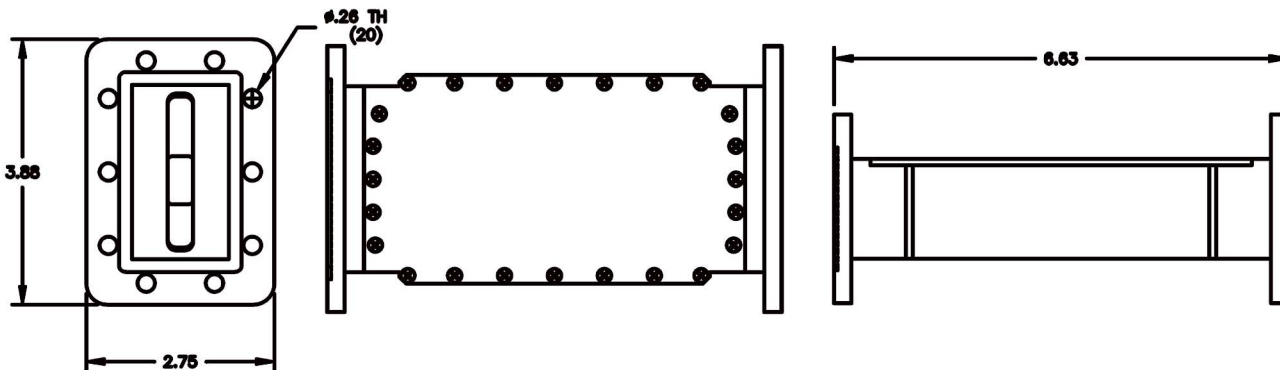


Channel Settings									
Channel	Sweep Type	Points	Start (GHz)	Stop (GHz)	IF BW (kHz)	Sweep Time (s)	Pow 1 (dBm)	Pow 2 (dBm)	
1	LinFreq	3201	3.200000	4.900000	35.000000	0.098030	9.000000	9.000000	

Trace Attributes									
Window	ID	Trace	Channel	Correction	Options	Marker	Position	Response	
1	S11	1	C 2-Port			1	3820 MHz	-22.933 dB	
						2	4200 MHz	-23.608 dB	
2	S21	1	C 2-Port			1	3820 MHz	-1.4594 dB	
						2	4200 MHz	-0.77823 dB	
						3	3700 MHz	-81.505 dB	
						4	3720 MHz	-75.967 dB	
						5	3800 MHz	-62.446 dB	
						6	3805 MHz	-31.309 dB	
						7	4230 MHz	-37.183 dB	

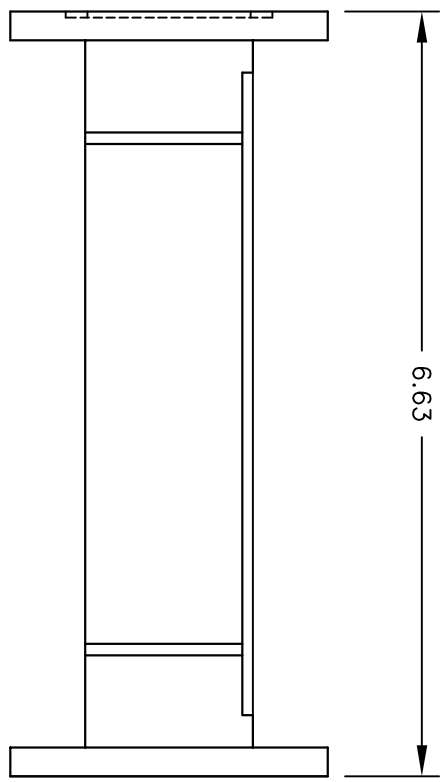
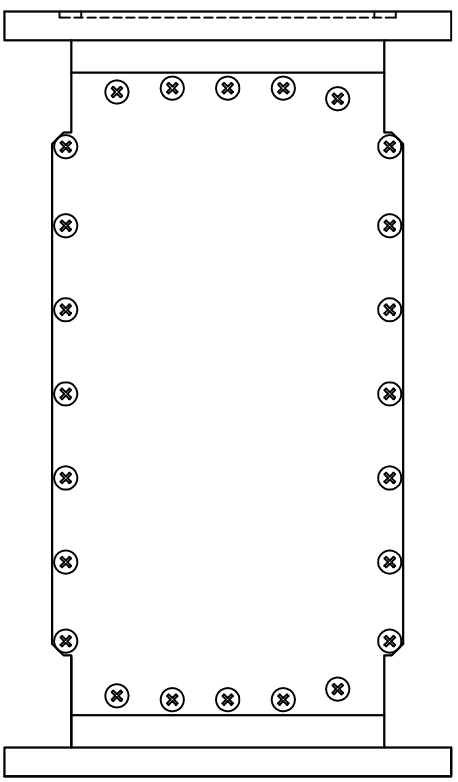
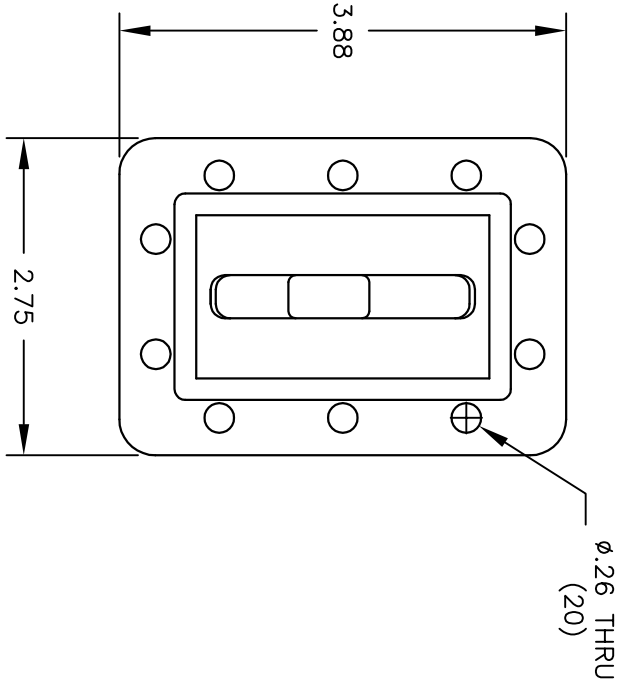
UNLESS SPECIFIED  
ALL TOLERANCES  $\pm 0.06$



ALL MFC PRODUCTS ARE MADE IN THE USA

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REVISION			
LTR	ECN	DATE	APPR'D
A	-	4/20	PMB
B	-	6/20	MW
C	-	6/20	MW
D	-	7/20	MW



**SPECIFICATIONS**

PASSBAND: 3820-4200 MHz

INSERTION LOSS:

FROM 3820-3825 MHz: 1.4 dB MAX,  $\pm 0.2$  dB  
 FROM 3825-4200 MHz: 1.2 dB MAX,  $\pm 0.2$  dB

RETURN LOSS: 20 dB MIN

GROUP DELAY VARIATION: 1.45 nSEC TYP  
 $\pm 0.5$  MHz FROM ANY

FREQUENCY WITHIN PASSBAND

REJECTION: 70 dB MIN FROM 3700 MHz TO 3720 MHz  
 60 dB MIN FROM 3720 MHz TO 3800 MHz  
 30 dB MIN FROM 3800 MHz TO 3805 MHz

25 dB MIN @ 4230 MHz

FLANGES: CPR229G (INPUT)  
 CPR229F (OUTPUT)

**ENVELOPE DRAWING**

		<b>FSCM27834</b>	
DATE	2/11/20	TITLE	
DWN BY	MW	BANDPASS FILTER	
ENGINEER	J.S.	DRAWING NO.	20541
			REV
			D

UNLESS SPECIFIED  
 ALL TOLERANCES  $\pm 0.060$



# MFC

Microwave Filter Company, Inc.

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**5G C-BAND BANDPASS FILTER  
MODEL 20523**

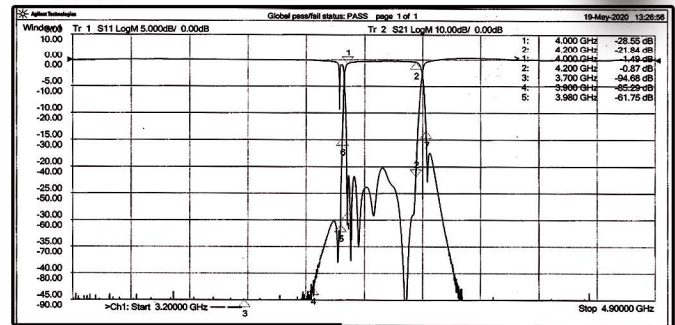
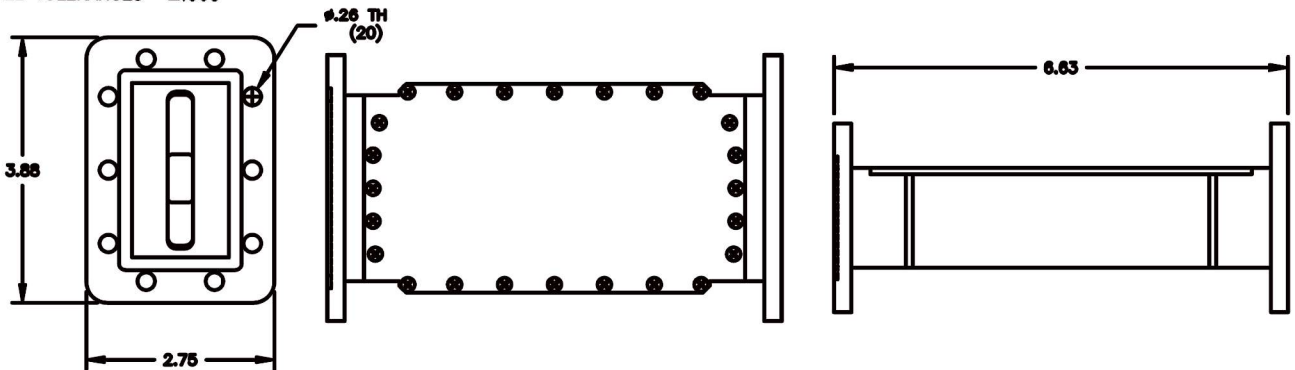
Ideal for eliminating interference from 5G and virtually any other potential source of out-of-band interference.

The model 20523 combines innovative design techniques with the solid performance of its renowned predecessors.

**SPECIFICATIONS**

- PASSBAND:** 4000–4200 MHz
- INSERTION LOSS:**
  - FROM 4000–4005 MHz: 1.4 dB MAX, ±0.2 dB
  - FROM 4005–4200 MHz: 1.2 dB MAX, ±0.2 dB
- RETURN LOSS:** 20 dB MIN
- GROUP DELAY VARIATION:** 1.45 nSEC TYP  
±0.5 MHz FROM ANY FREQUENCY WITHIN PASSBAND
- REJECTION:**
  - 70 dB MIN FROM 3700 MHz TO 3900 MHz
  - 60 dB MIN FROM 3900 MHz TO 3980 MHz
  - 30 dB MIN FROM 3980 MHz TO 3985 MHz
  - 25 dB MIN @ 4230 MHz
- FLANGES:** CPR229G (INPUT)  
CPR229F (OUTPUT)

UNLESS SPECIFIED  
ALL TOLERANCES ±.060



Channel Settings									
Channel	Sweep Type	Points	Start (GHz)	Stop (GHz)	IF BW (kHz)	Sweep Time (s)	Pow 1 (dBm)	Pow 2 (dBm)	
1	LinFreq	3201	3.200000	4.900000	35.000000	0.096030	9.000000	9.000000	

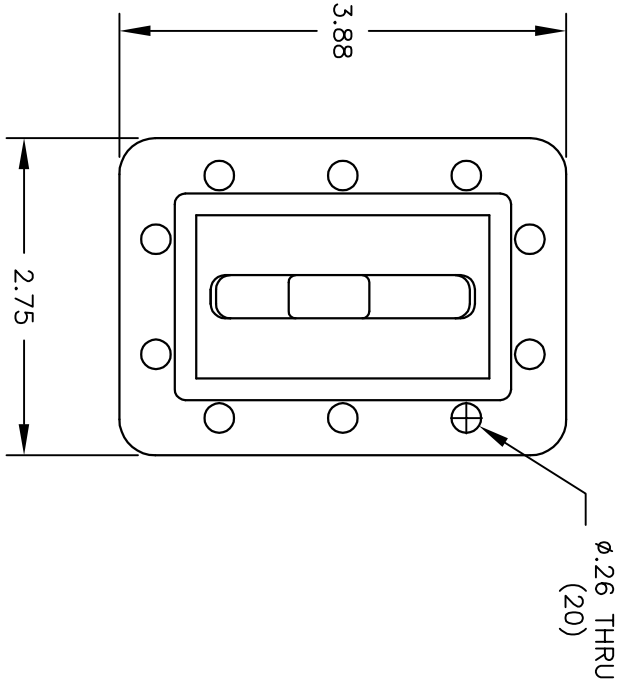
  

Trace Attributes									
Window	ID	Trace	Channel	Correction	Options	Marker	Position	Response	
1	1	S11	1			C 2-Port	1	4000 MHz	-28.552 dB
							2	4200 MHz	-21.844 dB
2	2	S21	1			C 2-Port	1	4000 MHz	-1.4926 dB
							2	4200 MHz	-0.87429 dB
							3	3700 MHz	-94.679 dB
							4	3900 MHz	-85.295 dB
							5	3980 MHz	-61.751 dB
							6	3985 MHz	-29.374 dB
							7	4230 MHz	-26.719 dB

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REVISION			
LTR	ECN	DATE	APPR'D
A	-	4/20	PMB
B	-	6/20	MW
C	-	6/20	MW
D	-	7/20	MW



SPECIFICATIONS

PASSBAND: 4000-4200 MHz

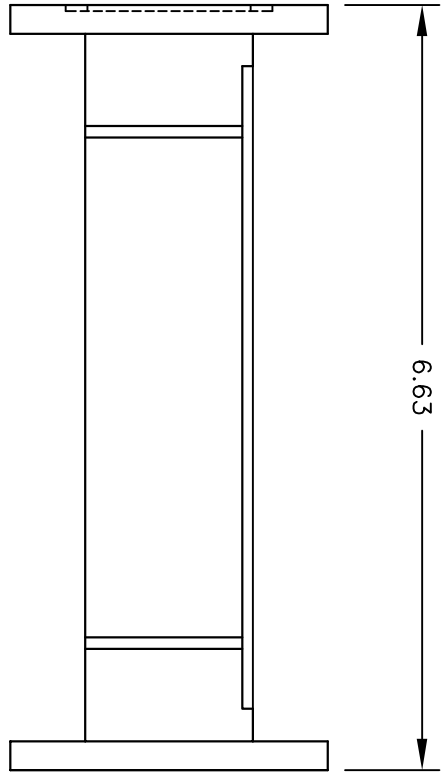
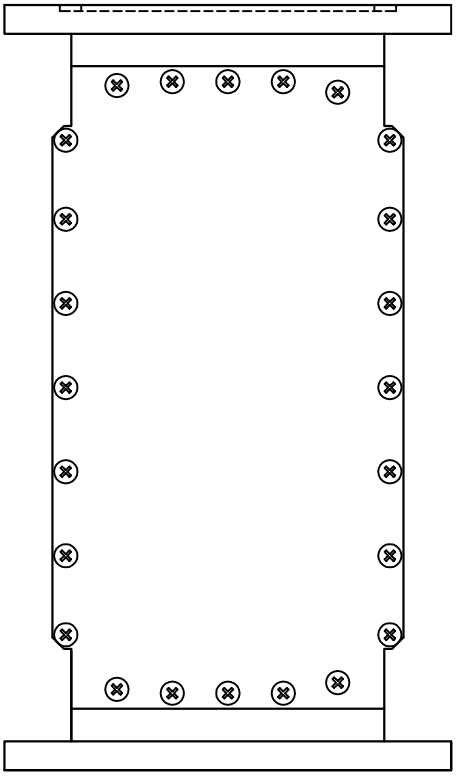
INSERTION LOSS:  
 FROM 4000-4005 MHz: 1.4 dB MAX, ±0.2 dB  
 FROM 4005-4200 MHz: 1.2 dB MAX, ±0.2 dB

RETURN LOSS: 20 dB MIN

GROUP DELAY VARIATION: 1.45 nSEC TYP  
 ±0.5 MHz FROM ANY FREQUENCY WITHIN PASSBAND

REJECTION:  
 70 dB MIN FROM 3700 MHz TO 3900 MHz  
 60 dB MIN FROM 3900 MHz TO 3980 MHz  
 30 dB MIN FROM 3980 MHz TO 3985 MHz  
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FLANGES:  
 CPR229G (INPUT)  
 CPR229F (OUTPUT)



ENVELOPE DRAWING

<b>MFC</b> MICROWAVE FILTER CO., INC. 675 KROME ST., N.W. SPRINGSBORO, N.Y. 13457		TITLE BANDPASS FILTER	
DATE 2/11/20	ENGINEER J.S.	DRAWING NO. 20523	REV D

UNLESS SPECIFIED  
 ALL TOLERANCES ±.060



# THE LATEST FROM MICROWAVE FILTER COMPANY

# MFC

MicrowaveFilter.com

## MFC 20541

PASSBAND: 3820–4200 MHz

INSERTION LOSS:

FROM 3820–3825 MHz: 1.4 dB MAX,  $\pm 0.2$  dB

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CPR229F (OUTPUT)

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PASSBAND: 4000–4200 MHz

INSERTION LOSS:

FROM 4000–4005 MHz: 1.4 dB MAX,  $\pm 0.2$  dB

FROM 4005–4200 MHz: 1.2 dB MAX,  $\pm 0.2$  dB

RETURN LOSS: 20 dB MIN

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 $\pm 0.5$  MHz FROM ANY

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REJECTION: 70 dB MIN FROM 3700 MHz TO 3900 MHz

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FLANGES: CPR229G (INPUT)

CPR229F (OUTPUT)

REV D - AUG 2020

A GLOBAL LEADER IN  
FILTER MANUFACTURING, MFC  
HAS BEEN PROVIDING  
INTERFERENCE SOLUTIONS  
SINCE 1967.

DON'T DELAY,

# MHz

MEGA HERTZ

800-883-8839  
go2MHz.com



<https://www.go2mhz.com/our-applications-and-solutions/5g-transition-c-band-repack/>