PRODUCT DATASHEET

8PPXX110C / 8PPXX113C

Band III (VHF) PeakPower+™ bandpass filter

The RFS 8PPXX110C is designed for global filtering applications associated with DTV television transmission. It is an 8-pole natural air-cooled filter incorporating two cross-couplings to meet all mask requirements.
8PPXX113C model is available with enhanced power rating specifications.

FEATURES / BENEFITS

- Very compact for easy integration into equipment.
- Very low insertion loss (lowest for this size).
- Highest power rating for size/class.
- Tunable over full VHF band (170 – 230 MHz).
- Adjustable bandwidth, available for 6 and 7 MHz channels for global applications.
- External, non-invasive coupling adjustment.
- Tunable for ETSI, ISDB-T critical and ATSC 1.0 and ATSC 3 applications.
- -5 to 55°C degree ambient temperature operation.
- Natural air cooled.
- High Attenuation at 2fc and 3fc. May save the cost of Low Pass Filters.

8PPXX110C Natural Air Cooled Filter

Technical features

GENERAL SPECIFICATIONS

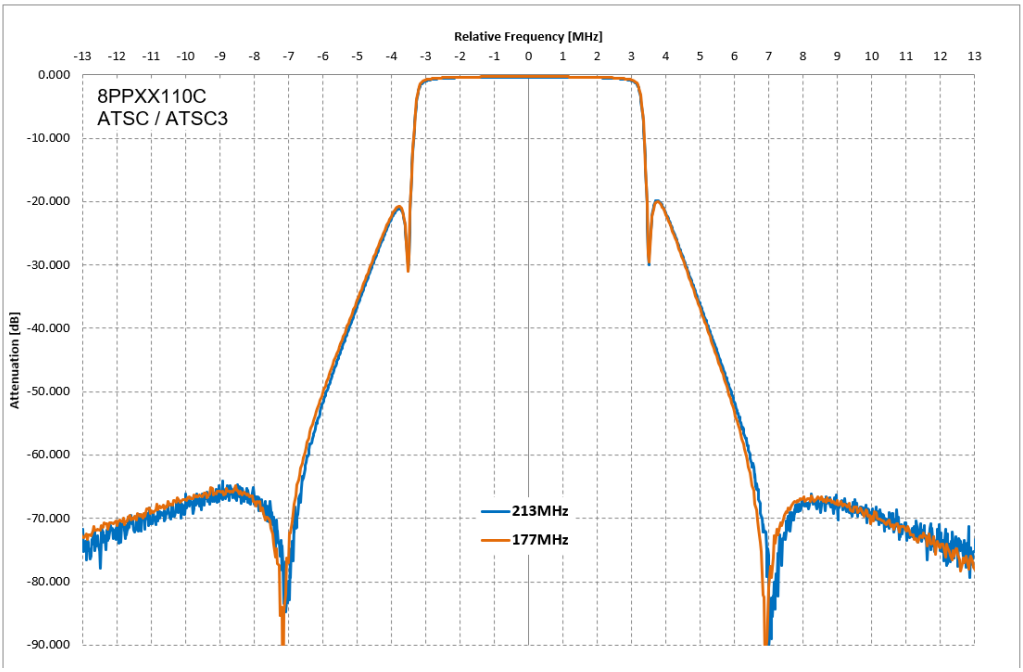
Product Line		Filters
Product Type		Band III (VHF) TV Bandpass Filter
Model		8PPXX110C / 8PPXX113C * NOTE 2
Filter type		8 Pole with 2 cross couplings - 110 mm ground plane spacing
Input / Output Connector		1-5/8" EIA Unflanged Female (Standard) 7/8" EIA Flanged Female (Optional) or 7-16 DIN (Optional)

MECHANICAL SPECIFICATIONS

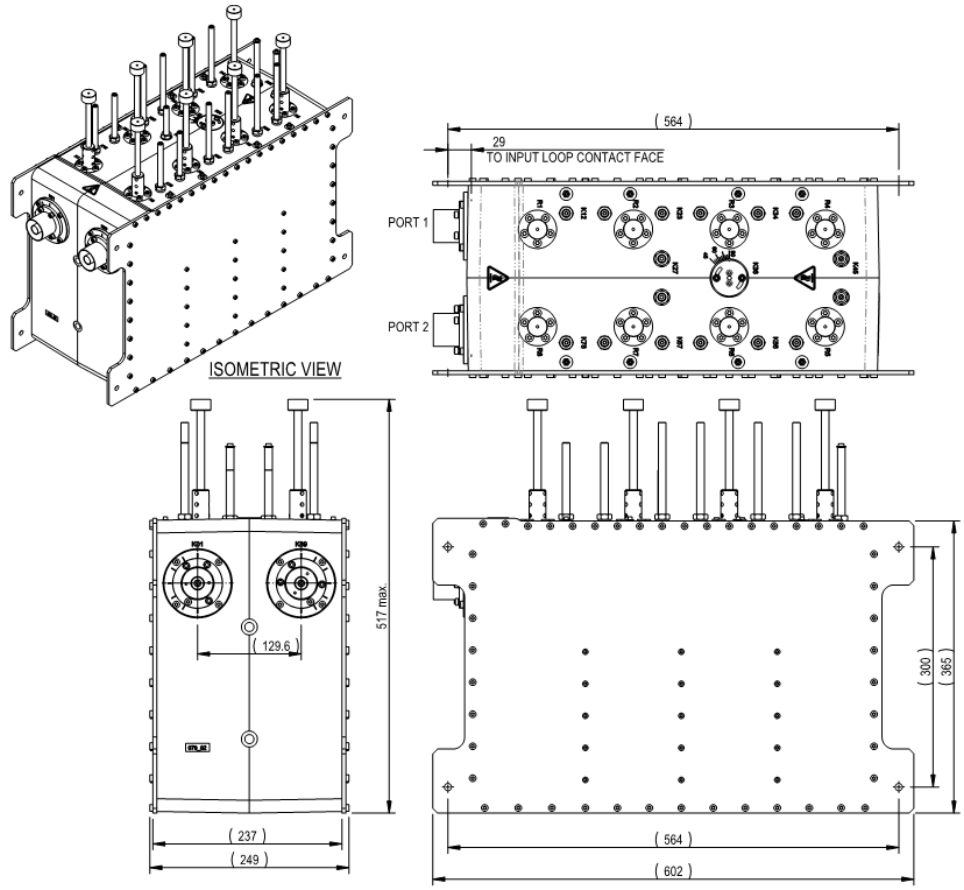
Dimensions-WxDxH	mm (in)	249 x 602 x 517 (9.8 x 23.7 x 20.4)
Color		Black
Weight	kg (lb)	40 (88)

SPECIFICATIONS

Out-of-Band Emissions Mask		DVB-T & T2 ETSI critical	ISDB-T critical	ATSC and ATSC 3
Channel Bandwidths	MHz	7	6	6
Frequency Range	MHz	170-230		
Input Power Rating	kW	3.5 @ 177.5MHz 3.5 @ 226.5MHz 4.0* @ 177.5MHz 4.0* @ 226.5MHz *NOTE 2	2.7 @ 173MHz 2.7 @ 219MHz 3.2* @ 173MHz 3.2* @ 219MHz *NOTE 2	3.0 @ 177MHz 3.0 @ 213MHz 3.5* @ 177MHz 3.5* @ 213MHz *NOTE 2
Insertion Loss at Fc	dB	<0.28 @ 177.5MHz <0.35 @ 226.5MHz <0.26* @ 177.5MHz <0.32* @ 226.5MHz	<0.35 @ 173MHz <0.45 @ 219MHz <0.32* @ 173MHz <0.41* @ 219MHz	<0.33 @ 177MHz < 0.38 @ 213MHz <0.31* @ 177MHz <0.35* @ 213MHz
Attenuation	dB	<1.35 at fc ±3.33 MHz <1.9 at fc ±3.4 MHz <1.25* at fc ±3.33 MHz <1.75* at fc ±3.4 MHz >15 at fc ±3.7 MHz >27.0 at fc ±5.25 MHz >52.0 at fc ±10.5 MHz >58.0 at fc ±11.75 MHz >65dB at 2fc and 3fc	<1.62 at fc ±2.79 MHz <1.49* at fc ±2.79 MHz >14.0 at fc ±3.15 MHz >31.0 at fc ±4.5 MHz >65.0 at fc ±9.0 MHz >65dB at 2fc and 3fc	<0.75 at fc ±2.69 MHz <0.95 at fc ±2.915 MHz <0.68* at fc ±2.69 MHz <0.87* at fc ±2.915 MHz >20.0 at fc ±3.5 MHz >20.0 at fc ±4.0 MHz >40.0 at fc ±6.0 MHz >65.0 at fc ±9.0 MHz >65dB at 2fc and 3fc NOTE 1
VSWR average across carriers		<1.1	<1.1	<1.1
Return Loss Average Across Carriers	dB	26.4	26.4	26.4
Group Delay Variation	ns	<750 at fc ± 3.33 MHz <990 at fc ± 3.4 MHz	<590 at fc ± 2.79 MHz	<290 at fc ±2.69 MHz <350 at fc ±2.915 MHz
Maximum Operating Temperature	°C (°F)	80 (176)		
Ambient Temperature Range	°C (°F)	-5 to 55 (23 to 131)		
Maximum Temperature Rise	°C (°F)	40 (104)		
Freq Drift - Ambient Temperature	kHz/°C(°F)	<0.3 (0.17)		



8PPXX110C Filter Response - ATSC/ ATSC 3



8PPXX110C Filter Dimensions

External Document Links

Notes

NOTE 1. TX Intermod shoulders 37 dB.

NOTE 2. Quote 8PPXX113C for power enhanced model.