PRODUCT DATASHEET

6PPXX201E Series

Band IV/V (UHF) PeakPower+TM bandpass filter

The RFS 6PPXX201E is designed for global filtering applications associated with DTV television transmission. It is a 6-pole liquid cooled filter incorporating two cross couplings to meet all mask requirements.

6PPXX201E Liquid Cooled Filter

FEATURES / BENEFITS

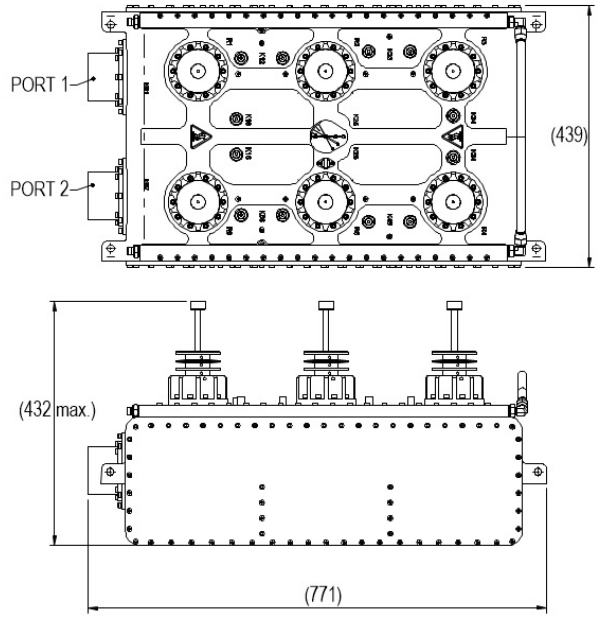
- Very compact for easy integration into equipment.
- Lowest insertion loss and highest power rating for its size/class.
- Tunable over full UHF band (470 – 862 MHz).
- Adjustable bandwidth, available for 6, 7 & 8 MHz channels for global applications.
- External, non-invasive coupling adjustment.
- Tunable for ETSI and ISDB-T critical and non-critical, and ATSC applications.
- -5 to 55 degree ambient temperature operation.

Technical features

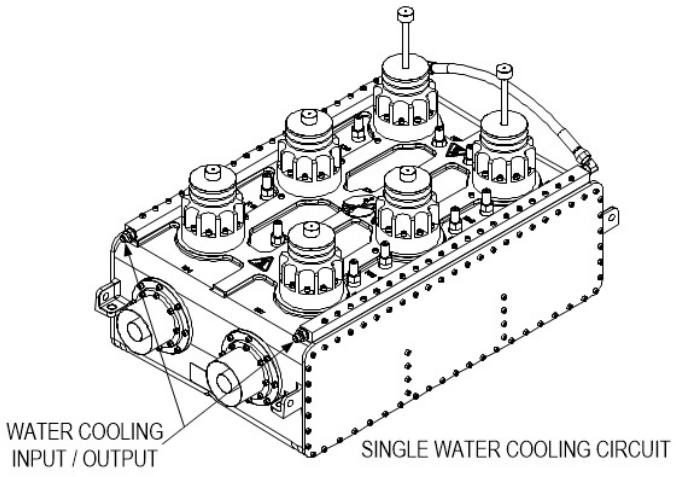
GENERAL SPECIFICATIONS		
Product Line		Filters
Product Type		Band IV/V (UHF) TV Bandpass Filter
Model		6PPXX201E
Filter type		6 Pole with 2 cross couplings - 200 mm ground plane spacing - Liquid Cooled
Input / Output Connector		3-1/8" EIA Unflanged Female (Standard) or 3-1/8" EIA Flanged Female (Optional) or 3-1/8" MYAT Unflanged Female (Optional) or NAX77D (Optional)
ELECTRICAL SPECIFICATIONS		
Impedance	Ω	50
MECHANICAL SPECIFICATIONS		
Weight	kg (lb)	59 (130)
COOLING		
Maximum Coolant Temp	°C (°F)	55 (131)
Flow Rate	l/min	3 ≤ rate ≤ 12 (1 ≤ rate ≤ 4 US gal.min)
Max. Propylene Glycol / Water Concentration	%	50

SPECIFICATIONS

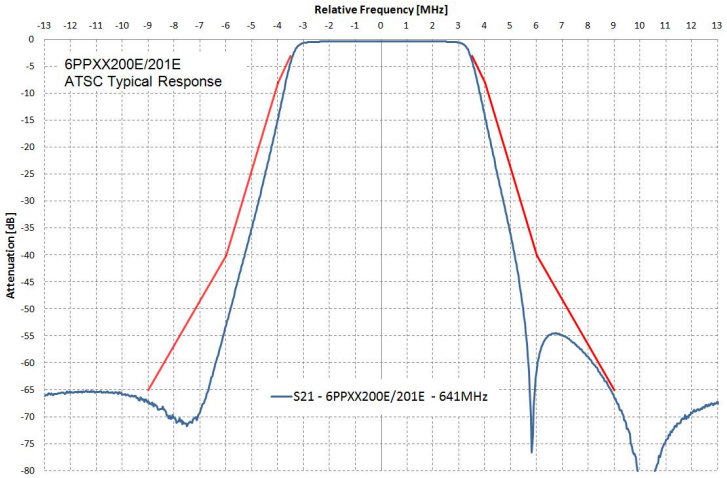
Out-of-Band Emissions Mask		DVB-T ETSI non-critical	DVB-T ETSI critical	ISDB-T sub critical	ISDB-T critical	ATSC 1.0/ ATSC 3.0
Channel Bandwidths	MHz	8	8	6	6	6
Input Power Rating	kW	12.5 @ 474 MHz 9.6 @ 858 MHz	12.6 @ 474 MHz 9.7 @ 858 MHz	11.8 @ 473MHz 8.0 @ 803MHz	11.3 @ 473MHz 8.1 @ 803MHz	13.3/13.3 @ 473MHz 10.3/8.3 @ 803MHz
Insertion Loss at fc	dB	<0.19 @ 474 MHz <0.23 @ 858 MHz	<0.23 @ 474 MHz <0.28 @ 858 MHz	<0.27 @ 473 MHz <0.34 @ 803 MHz	<0.30 @ 473 MHz <0.35 @ 803 MHz	<0.26 @ 473 MHz <0.35 @ 803 MHz
Attenuation	dB	<0.49 ± 3.8 @ fc=474 <0.57 ± 3.8 @ fc=666 <0.75 ± 3.8 @ fc=858 >5.0 ± 4.2 MHz >16.0 ± 6.0 MHz >41.0 ± 12.0 MHz	<1.0 ± 3.8 @ fc=474 <1.25 ± 3.8 @ fc=666 <1.65 ± 3.8 @ fc=858 >13.0 ± 4.2 MHz >24.0 ± 6.0 MHz >42.0 ± 12.0 MHz	<0.84 ± 2.79 @ fc=473 <0.94 ± 2.79 @ fc=641 <1.09 ± 2.79 @ fc=803 >8.0 ± 3.15 MHz >24.0 ± 4.5 MHz >50.0 ± 9.0 MHz	<1.07 ± 2.79 @ fc=473 <1.32 ± 2.79 @ fc=641 <1.49 ± 2.79 @ fc=803 >11.0 ± 3.15 MHz >26.0 ± 4.5 MHz >53.0 ± 9.0 MHz	<0.41 ± 2.69 @ fc=473 <0.45 ± 2.69 @ fc=641 <0.58 ± 2.69 @ fc=803 >3.0 ± 3.5 MHz >8.0 ± 4.0 MHz >40.0 ± 6.0 MHz >65.0 ± 9.0 MHz Note 1
VSWR average across carriers		≤1.1	≤1.2	≤1.17	≤1.2	≤1.1
Return Loss Average Across Carriers	dB	≥26.4	≥20.8	≥22.1	≥20.8	≥26.4
Group Delay Variation	ns	<295 ± 3.8 MHz	<585 ± 3.8 MHz	<475 ± 2.79 MHz	<585 ± 2.79 MHz	<150 ± 2.69 MHz
Maximum Operating Temperature	°C (°F)	80 (176)				
Ambient Temperature Range	°C (°F)	-5 to 55 (23 to 131)				
Maximum Temperature Rise	°C (°F)	Δ40 (Δ72)				
Freq Drift - Tx Operation	kHz/°C(°F)	<2 (1.2)				
Freq Drift - Ambient Temperature	kHz/°C(°F)	<2 (1.2)				



6PPXX201E Plan and Side Views



6PPXX201E Isometric View



Graph 1 - 6PPXX200E/201E Typical Filter Response

External Document Links

ETSI 8MHz Application Guide

ATSC Application Guide

ISDB-T 6MHz Application Guide

Notes

- Note 1. Tx intermod shoulder at 37dB