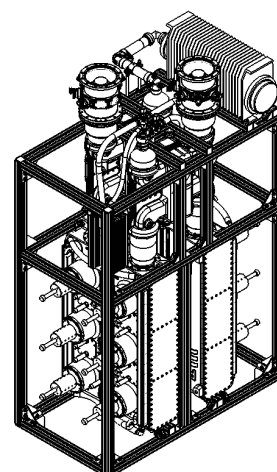




The RFS CA6PPXX271E-M is designed for global filtering applications associated with DTV television transmission. It is a 6-pole water cooled balanced filter incorporating two cross couplings to meet all mask requirements.

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 UHF band (470 – 701MHz).
- Adjustable bandwidth, available for 6, 7 & 8MHz 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.
- Multiple probe directional couplers can be added to the input and output for power monitoring.



CA6PPXX271E_M filter

Technical features

GENERAL SPECIFICATIONS

Product Line		Filters
Product Type		Band IV/V (UHF) TV Bandpass Filter
Model		CA6PPXX271E-M
Filter type		6 Pole with 2 cross couplings - 270 mm ground plane spacing - Water Cooled
Input / Output Connector		6-1/8" EIA Flanged Female (Standard)

MECHANICAL SPECIFICATIONS

Weight	kg (lb)	371 (818)
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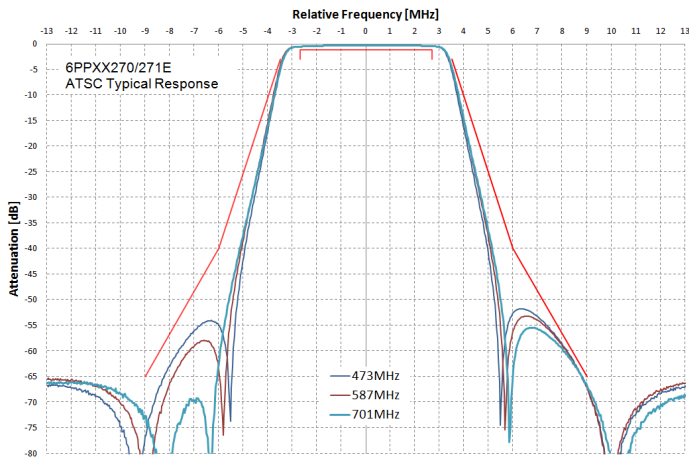
COOLING

Cooling		Water Cooled
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

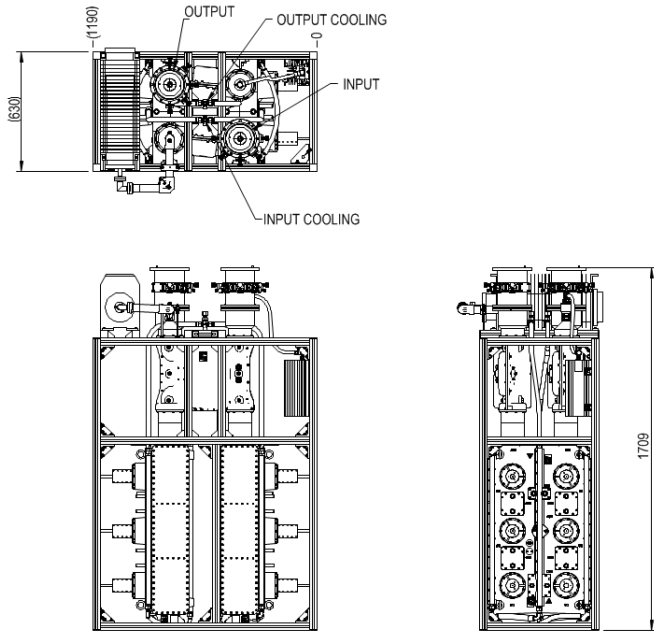


SPECIFICATIONS

Out-of-Band Emissions Mask		DVB-T ETSI non-critical	ISDB-T critical	ATSC1.0/ ATSC 3.0
Channel Bandwidths	MHz	8	6	6
Input Power Rating	kW	25.0 @ 474 MHz 19.2 @ 858 MHz	22.6 @ 473MHz 16.2 @ 803MHz	26.6 @ 473MHz 20.6 @ 701MHz
Insertion Loss at fc	dB	< 0.24 @ 474 MHz < 0.28 @ 858 MHz	< 0.35 @ 473 MHz < 0.40 @ 803 MHz	< 0.31 @ 473 MHz < 0.40 @ 701 MHz
Attenuation	dB	< 0.593 at Fc ± 3.8 @ fc=474 < 0.67 at Fc ± 3.8 @ fc=666 < 0.85 at Fc ± 3.8 @ fc=858 > 5.0 at Fc ± 4.2 MHz > 16.0 at Fc ± 6.0 MHz > 41.0 at Fc ± 12.0 MHz	< 1.17 ± 2.79 @ fc=473 < 1.42 ± 2.79 @ fc=641 < 1.59 ± 2.79 @ fc=803 > 11.0 at Fc ± 3.15 MHz > 26.0 at Fc ± 4.5 MHz > 53.0 at Fc ± 9.0 MHz	< 0.51 ± 2.69 @ fc=473 < 0.55 ± 2.69 @ fc=641 < 0.68 ± 2.69 @ fc=803 > 1.0 at Fc ± 3.25 MHz > 3.0 at Fc ± 3.5 MHz > 40.0 at Fc ± 6.0 MHz > 65.0 at Fc ± 9.0 MHz
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	<590 at Fc ± 3.8 MHz	<585 at Fc ± 2.79 MHz	<150 at Fc ± 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)	40 (104)		
Freq Drift - Tx Operation	kHz/°C(°F)	<2 (1.2)		
Freq Drift - Ambient Temperature	kHz/°C(°F)	<2 (1.2)		



6PPXX271E Filter Response



CA6PPXX271E-M Dimensions

External Document Links

- [ETSI 6MHz Application Guide](#)
- [ETSI 8MHz Application Guide](#)
- [ATSC Application Guide](#)
- [ISDB-T 6MHz Application Guide](#)

Notes