



The RFS 8PPXX162E is designed for global filtering applications associated with DTV television transmission. It is an 8-pole fan-cooled 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 – 862 MHz).
- Adjustable bandwidth, available for 6, 7 & 8 MHz channels for global applications.
- External, non-invasive coupling adjustment.
- Tunable for ETSI critical and ISDB-T critical and ATSC good adjacent neighbor applications.
- -5 to 55 degree ambient temperature operation.
- 115V (50/60Hz) and 230V (50/60Hz) fan cooling kits available.



8PPXX202E Fan Cooled Filter shown

**Technical features**

**GENERAL SPECIFICATIONS**

<b>Product Line</b>		Filters
<b>Product Type</b>		Band IV/V (UHF) TV Bandpass Filter
<b>Model</b>		8PPXX162E
<b>Filter type</b>		8 Pole with 2 cross couplings - 160 mm ground plane spacing - Fan cooled
<b>Input / Output Connector</b>		NAX77D, 1-5/8" EIA Unflanged Female, 1-5/8" EIA Flanged Female, 3-1/8" EIA Flanged or Unflanged Female or 4-7/8" Unflanged Female

**ELECTRICAL SPECIFICATIONS**

<b>Impedance</b>	Ω	50
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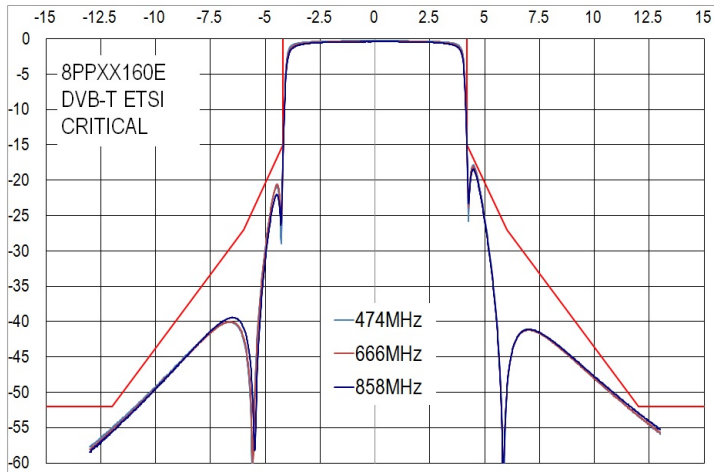
**MECHANICAL SPECIFICATIONS**

<b>Dimension-WxDxH</b>	mm (in)	353 x 886.5 x 338 (13.9 x 34.9 x 13.3)
<b>Weight</b>	kg (lb)	45.3 (99.7)



**SPECIFICATIONS**

Out-of-Band Emissions Mask		DVB-T ETSI critical	DVB-T ETSI critical	ISDB-T critical	ATSC 1.0/ ATSC 3
Channel Bandwidths	MHz	8	6	6	6
Input Power Rating	kW	7.8 @ 474 MHz 6.7 @ 858 MHz	6.8 @ 473 MHz 6.0 @ 803 MHz	6.7 @ 473 MHz 5.1 @ 803 MHz	6.7 @ 473 MHz 5.1 @ 803 MHz
Insertion Loss at fc	dB	<0.34 @ 474 MHz <0.41 @ 858 MHz	<0.43 @ 473 MHz <0.52 @ 803 MHz	<0.45 @ 473 MHz <0.54 @ 803 MHz	<0.45 @ 473 MHz <0.54 @ 803 MHz
Attenuation	dB	<1.49 at Fc ± 3.8 MHz >15.0 at Fc ± 4.2 MHz >27.0 at Fc ± 6.0 MHz >52.0 at Fc ± 12.0 MHz	<2.15 at Fc±2.85 MHz >15.0 at Fc ± 3.15 MHz >27.0 at Fc ± 4.5 MHz >52.0 at Fc ± 9.0 MHz	<1.75 at Fc±2.79 MHz >14.0 at Fc ± 3.15 MHz >31.0 at Fc ± 4.5 MHz >61.0 at Fc ± 9.0 MHz	<1.24 at Fc±2.69 MHz >20 at Fc ± 3.5 MHz >20 at Fc ± 4.0 MHz >40.0 at Fc ± 6.0 MHz >65 at Fc ± 9.0 MHz Note 1
VSWR average across carriers		≤1.1	≤1.1	≤1.1	≤1.1
Return Loss Average Across Carriers	dB	≥26.4	≥26.4	≥26.4	≥26.4
Group Delay Variation	ns	<590 at Fc ±3.8 MHz	<690 at Fc ±2.85 MHz	<590 at Fc ±2.79 MHz	<290 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)			

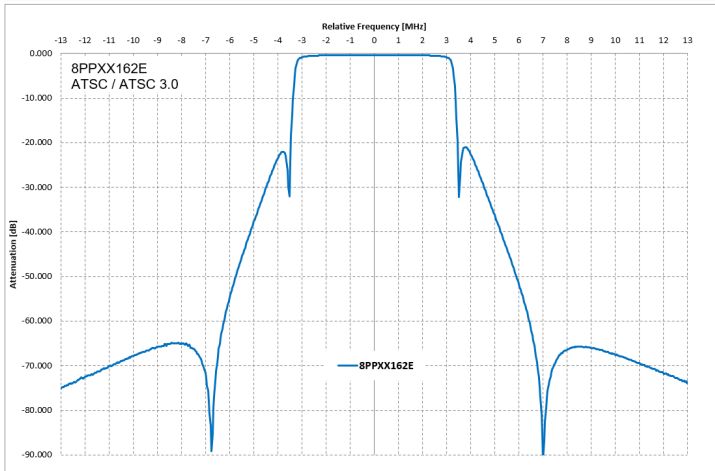


8PPXX160E Filter Response - ETSI Mask

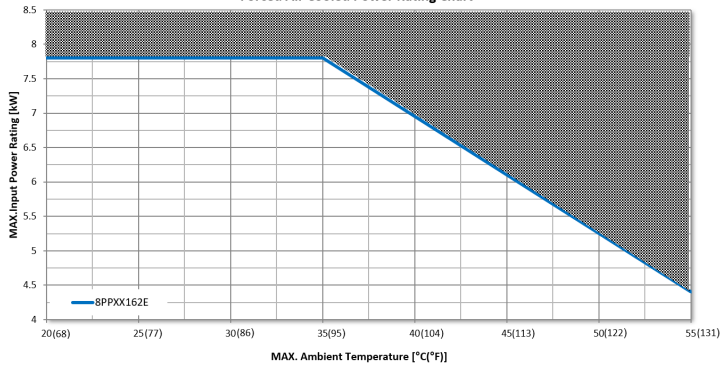


### 8PPXX162E Series

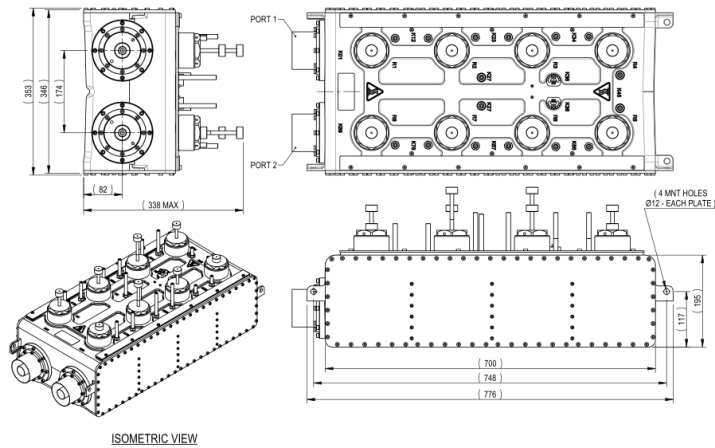
Band IV/V (UHF) PeakPower+™ bandpass filter



8PPXX162E Filter Response - ATSC 1.0/ ATSC 3 Mask  
Forced Air Cooled Power Rating Chart



8PPXX162E Power Rating vs Ambient Temperature [°C(°F)]



8PPXX162E Filter Dimensions

#### External Document Links

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

#### Notes

Note 1. Tx Intermod shoulder at 37 dB