PRODUCT DATASHEET

8PPXX160E Series

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

The RFS 8PPXX160E is designed for global filtering applications associated with DTV television transmission. It is an 8-pole 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, ISDB-T critical, or ATSC applications.
- -5 to 55 degree ambient temperature operation.

8PPXX160E Filter

Technical features

GENERAL SPECIFICATIONS

Product Line		Filters
Product Type		Band IV/V (UHF) TV Bandpass Filter
Model		8PPXX160E
Filter type		8 Pole with 2 cross couplings - 160 mm ground plane spacing
Input / Output Connector		1-5/8" EIA Unflanged Female (Standard), 1-5/8" EIA Flanged Female & 3-1/8" EIA Flanged or Unflanged Female (Optional)

MECHANICAL SPECIFICATIONS

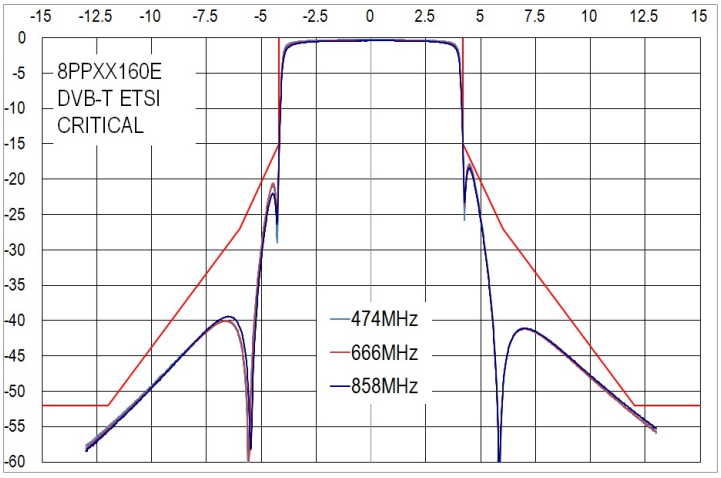
Dimension-WxDxH	mm (in)	346 x 789 x 397 (13.6 x 31 x 15.6)
Color		Black
Weight	kg (lb)	45.3 (99.7)

COOLING

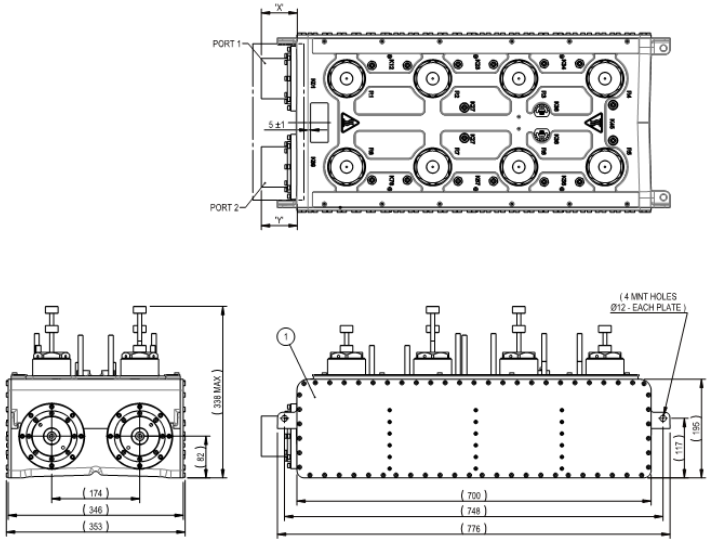
Cooling		Natural air

SPECIFICATIONS

Out-of-Band Emissions Mask		DVB-T ETSI critical	DVB-T ETSI critical	ISDB-T critical	ATSC 1.0/ ATSC 3.0
Channel Bandwidths	MHz	8	6	6	6
Input Power Rating	kW	3.9 @ 474 MHz 2.9 @ 858 MHz	3.2 @ 473 MHz 2.8 @ 803 MHz	3.2 @ 473 MHz 2.8 @ 803 MHz	3.2 @ 473 MHz 2.8 @ 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 ± 3.8 MHz >15.0 ± 4.2 MHz >27.0 ± 6.0 MHz >52.0 ± 12.0 MHz	<2.15 ± 2.85 MHz >15.0 ± 3.15 MHz >27.0 ± 4.5 MHz >52.0 ± 9.0 MHz	<1.75 ± 2.79 MHz >14.0 ± 3.15 MHz >31.0 ± 4.5 MHz >61.0 ± 9.0 MHz	<1.24 ± 2.69 MHz >20 ± 3.5 MHz >20 ± 4.0 MHz >40.0 ± 6.0 MHz >65 ± 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 ± 3.8 MHz	<690 ± 2.85 MHz	<590 ± 2.79 MHz	<290 ± 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 response



8PPXX160E Filter Views

PART No	PORT 1	PORT 2	DIM 'X'	DIM 'Y'	TUNING STATUS	PACKING INCLUDED
25.70138.109	16UF MYAT	16UF MYAT	110	110	NOT TUNED	YES
25.70138.009					TUNED	
25.70138.108	31FL	31FL	94	94	NOT TUNED	YES
25.70138.008					TUNED	
25.70138.107	16FL	16FL	105	105	NOT TUNED	
25.70138.007					TUNED	
25.70138.206	49UF	31UF	124.5	71	NOT TUNED	NO
25.70138.205	31UF	49UF	71	124.5		
25.70138.204	31UF	31UF	71	71	NOT TUNED	
25.70138.104						YES
25.70138.004					TUNED	
25.70138.103	NAX77D	NAX77D	72.5	72.5	NOT TUNED	
25.70138.003					TUNED	
25.70138.102	NAX39D	NAX39D	96	96	NOT TUNED	
25.70138.002					TUNED	
25.70138.201	16UF	16UF	90	90	NOT TUNED	NO
25.70138.101	16UF	16UF	90	90	NOT TUNED	YES
25.70138.001					TUNED	

8PPXX160E Filter Variants

External Document Links
ETSI 6MHz Application Guide
ETSI 8MHz Application Guide
ATSC Application Guide
ISDB-T 6MHz Application Guide

Notes
Note 1. Tx intermode shoulder at 37 dB.