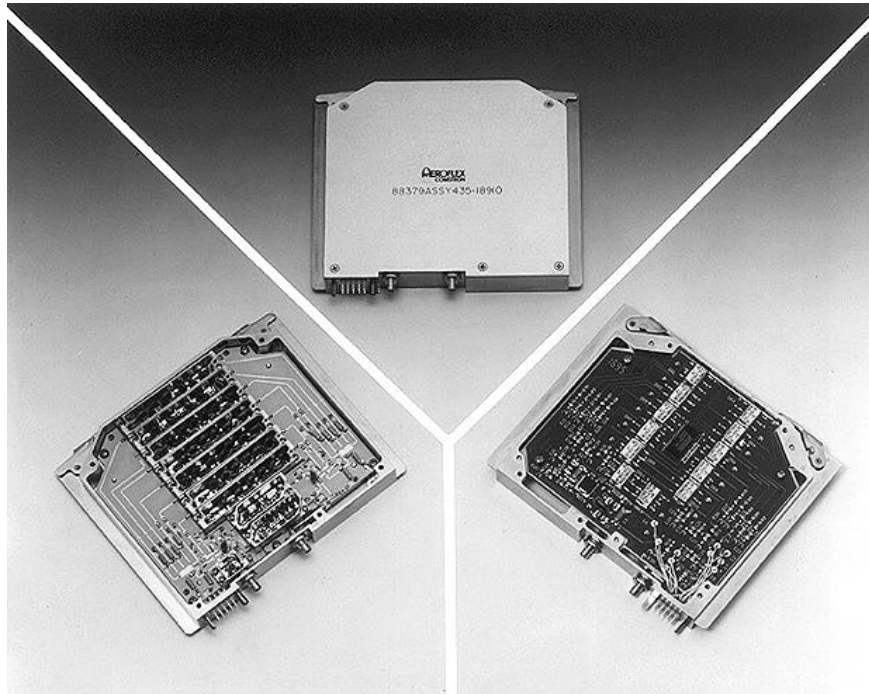


FA4489

**9 CHANNEL PRESELECTOR
ULTRA LOW INTERMODULATION
DISTORTION 1 MHZ - 1200 MHZ****FEATURES**

- ULTRA LOW INTERMODULATION DISTORTION
- 9 CHANNELS
- LOW INSERTION LOSS OVER ALL BANDS
- LOW AMPLITUDE RIPPLE
- SHARP ATTENUATION
- FAST SWITCHING SPEED
- LOW SWITCHING TRANSIENTS
- SMALL SIZE AND LOW WEIGHT
- FULL MIL
- LOW COST

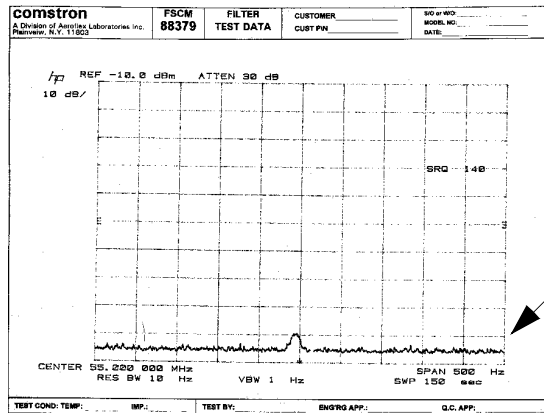
DESCRIPTION

The Comstron Model FA4489 is a switchable filter module with the capability of selecting any one of nine channels with a four TTL control signal. This device is used as the front-end preselector in a high dynamic range receiver. The filter module introduces very low intermodulation distortion along with low insertion loss - a necessary requirement for excellent receiver performance.

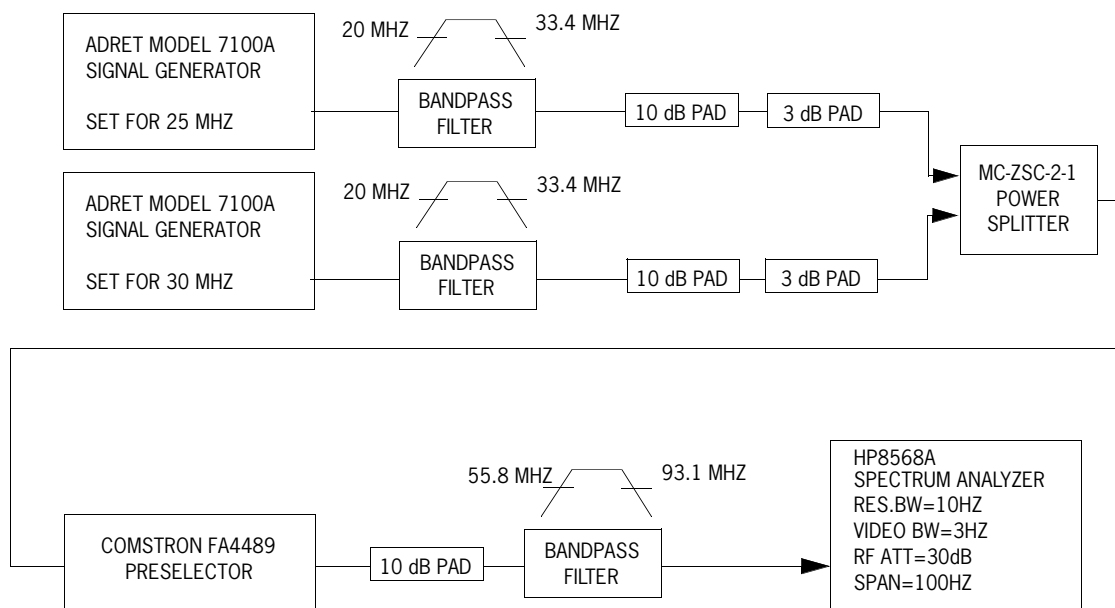
**ULTRA LOW INTERMODULATION
DISTORTION**

Comstron has developed a proprietary switching matrix that spans 1 MHz to 1200 MHz (more than 3 decades wide) along with introducing low intermodulation distortion and low signal loss. The pin diodes utilized in the SP9T switch are optimum for high- lifetime carrier, low junction capacitance and low series resistance and help produce second and third order output intercept points (IP_2 and IP_3) of 90 dBm and 45 dBm respectively.

FA4489



90 dBm Level

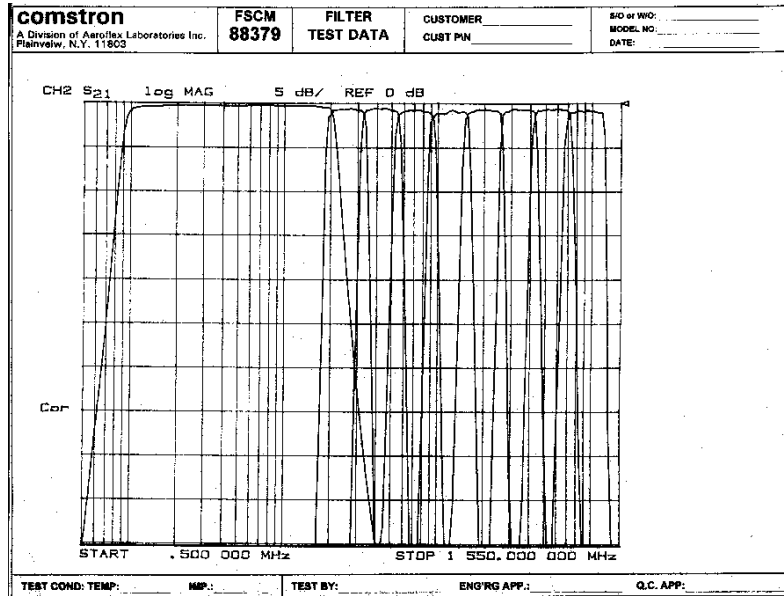


IP₂ TEST SETUP FOR CHANNEL 2 AND 3 PERFORMANCE

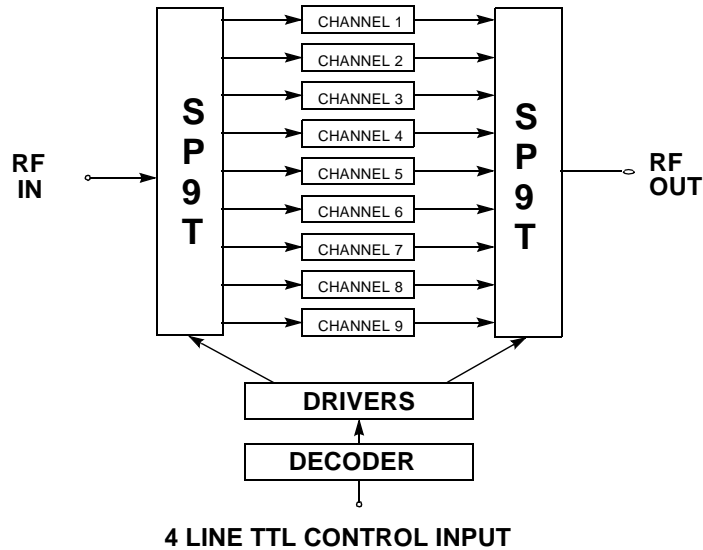
FA4489

9 CHANNELS WITH SHARP ATTENUATION

Each of the 9 channel filters is composed of 12 pole pseudo-elliptic function lumped component (lc) elements. These elements are optimized to provide the highest amount of attenuation for the given package size. The filters provide a minimum of 60 dB/octave and provide an ultimate attenuation of 50 dB minimum to 5000 MHz.



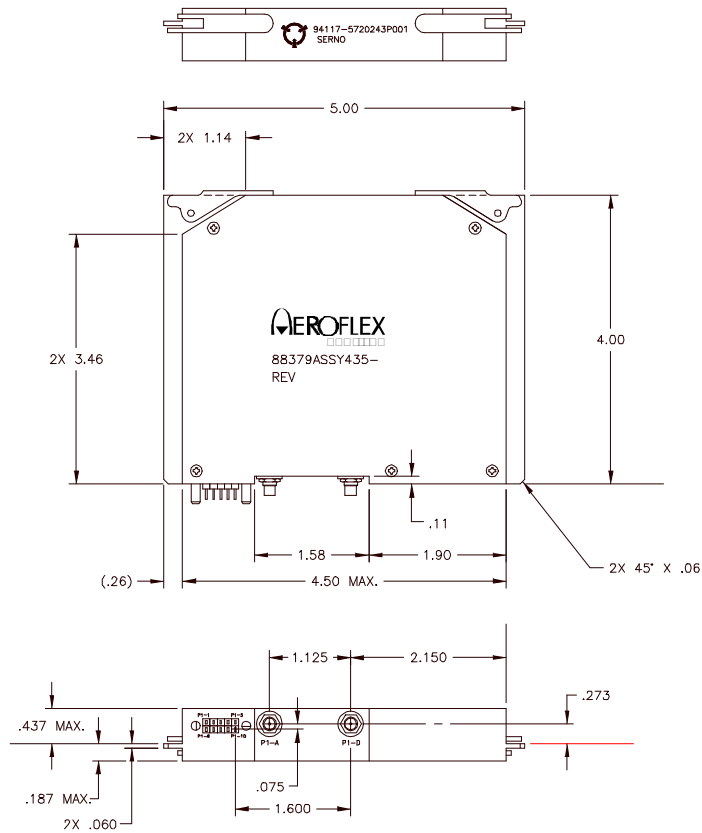
FUNCTIONAL BLOCK DIAGRAM



FA4489

SPECIFICATIONS				
CHARACTERISTICS			TYPICAL	LIMITS
INSERTION LOSS ACROSS ALL BANDS			2.0 DB	3.0 DB
PASSBANDS	BAND 1	1-20 MHZ	.8 DB	1.0 DB MAX
	BAND 2	20-34 MHZ	.8 DB	1.0 DB MAX
	3/4 OCTAVE EACH		.8 DB	1.0 DB MAX
	BAND 9	640-1280 MHZ	.8 DB	1.0 DB MAX
STOPBAND ATTENUATION			60 DB/OCTAVE	50 DB/OCTAVE MIN
ULTIMATE ATTENUATION TO 5000 MHZ			55 DB	50 DB MIN
VSWR (50 OHMS) IN/OUT ALL BANDS			1.4:1	1.5:1 MAX
OUTPUT INTERCEPT POINTS				
2 ND ORDER			+ 92 DBM	+90 DBM MIN
3 RD ORDER			+ 47 DBM	+45 DBM MIN
SWITCHING SPEED			6 μSEC	10 μSEC MAX
DC POWER	+ 5 V			140 MA MAX
	- 15 V			100 MA MAX
WEIGHT				14 OUNCES
MECHANICAL CONFIGURATION			EDGE CONNECTORS WITH GPO RF IN/OUT	

OUTLINE DRAWING



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