

## MODEL 506FP

### Non-Reflective UHF - H Limiter



#### Features:

- Does not distort incoming signals
- Will not degrade system impedance
- Input low-pass filter rejects out of band signals
- Hermetically sealed Kovar package

The model 506 is a UHF High Band RF signal limiter intended for front end protection in transmitter co-located environments.

Unlike conventional diode based limiters, the model 506 does not distort (clip) the incoming signals nor degrade the system's match (impedance). When in limiting, the 506 proportionately attenuates the incoming signals, preserving the system's linear performance and match. The unit is housed in a hermetic Kovar package.

#### Electrical Characteristics:

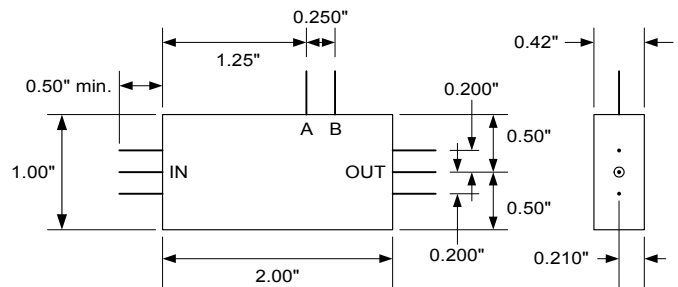
Frequency Range	1200 – 3000 MHz
Insertion Loss (below threshold)	3.0 dB
Maximum Attenuation (above threshold)	25 dB
Limiting Threshold	+8 to +22 dBm, user adjustable
Transient Time	2 $\mu$ S
Maximum Input Level	+33 dBm
Inter-modulation Distortion, OIP <sup>3</sup>	+45 dBm
Impedance	50 $\Omega$
Return Loss / VSWR	-14 dB / 1.5:1
Bias Voltage	see table

#### Mechanical Characteristics:

RF Connectors: Pins - See Below

#### Environmental:

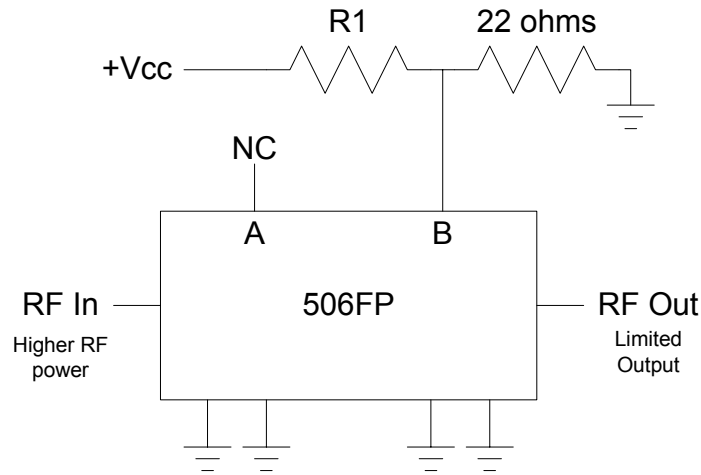
Operating Temperature: -20° to +70° C



0.030" dia. Pins, 8 places

Unmarked pins are ground. Pin A is the +Vcc.  
Pin B is the threshold adjust, user select resistors.

## Setting the Limiting Threshold:



Limiting dBm	Bias Voltage (Vdc) pin B	Resistor R1 (ohms)		
		+5V	+12V	+15V
8	0.00	open	open	open
9	0.03	4052	9756	12200
10	0.10	1078	2618	3278
11	0.19	573	1405	1762
12	0.28	365	908	1140
13	0.39	259	651	820
14	0.50	198	506	638
15	0.65	147	384	486
16	0.79	118	313	397
17	0.97	91	250	318
18	1.17	72	205	261
19	1.37	58	171	219
20	1.68	44	136	175
21	1.94	35	114	148
22	2.17	29	100	130

**Absolute Ratings:** (operation above these levels may cause permanent damage)

DC Supply Voltage, +Vcc (A): DNA

Maximum RF Input Level: +33 dBm

Maximum Threshold Voltage (B): +10 Volts

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