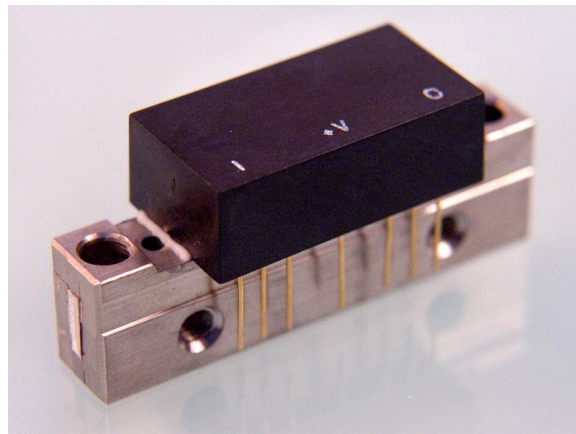


**Features: (typical values)**

- Ultra High Linearity
- Low Noise Figure
- Rugged Construction
- Operation over wide voltage range
- Usable for 50 ohm operation
- Unconditional Stability

**40 – 550 MHz  
38 dB CATV Ultra-linear  
Amplifier**



**Maximum Ratings**

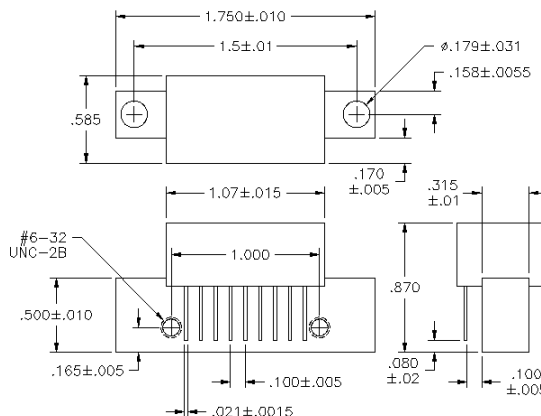
Storage temperature ..... -40°C to +100°C  
 DC Operating Voltage ..... +26.0 volts  
 RF Input Voltage ..... 40 dBmV max.  
 Operating Base Temp. .... +100°C

Specifications @ Tcase = 30°C (Referenced to 75 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency Range		40	550	MHz.
Power Gain	f = 50MHz.	37.0	38.0	dB.
Cable equivalent slope	f = 40MHz. TO 550MHz.	0	1.0	dB.
Gain Flatness (peak to valley)	f = 40MHz. TO 550MHz.		0.8	dB.
Input/Output Return Loss	f = 40 To 160 MHz.	18		dB.
Input/Output Return Loss	f = 160 To 550 MHz.	16		dB.
Composite Triple Beat (CTB)	77 channels flat, Vo=44dBmV. Measured @ Channel 78		-57	dB.
Cross Modulation (XMOD)	77 channels flat, Vo=44dBmV. Measured @ Channel 2		-57	dB.
Composite 2 <sup>nd</sup> Order (CSO)	77 channels flat, Vo=44dBmV. Measured @ Channel 78		-57	dB.
IP <sub>3</sub> /IP <sub>2</sub>	2 tones @ +15dbm per tone	42/60		dBm.
Noise Figure (NF)	@ f = 550 MHz.		6.5	dB.
Total Current (I <sub>TOT</sub> )	@ +24V/330mA		340	mA.

**Pin Configuration**

PIN#	Description
1	Input
2,3,7,8	Ground
5	+V.
9	Output
4, 6	Not used



**FINAL ELECTRICAL TEST REPORT**  
**RECORD DATA @ +30°C ONLY**

TEST (REF 75 OHM) Vdc +24V	LIMITS +30°C	ACTUAL DATA
Power Gain @50 MHz	37.0 dB min 38.0 dB max	37.5
Cable equivalent slope 40 MHz to 550 MHz	1.0 dB Max	0.6
Gain Flatness (peak to peak) 40 MHz to 550 MHz	0.8 dBpp max	0.6
Noise Figure @ 550 MHz	6.5 dB max	5.2
DC Current at +24 Vdc	350 mA max	335
VSWR In (75 OHM) @40 to 160 MHz @160 to 550 MHz	18 dB Min 16 dB Min	19.5 18.5
VSWR Out (75 OHM @40 to 160 MHz @160 to 550 MHz	18 dB Min 16 dB Min	20.0 17.5
IP3 @ Pout = +15 .0 dBm 1) F(1,2)= 41,42 MHz Fc(40,43 MHz) 2) F(1,2)= 248,249 MHz Fc(247,250) MHz) 3.)F(1,2)= 548,549 MHz Fc(547,550) MHz)	+42.0 dBm min	43
IP2 @ Pout = +15 dBm min.0 dBm 1) (F1-F2) = (550-510) MHz Fc = 40 MHz 2) (F1+F2) = (210+40) MHz Fc = 250 MHz 3.) (F1+F2) = 510+40) MHz Fc= 550 MHz	+60.0 dBm min	62
Composite Triple Beat (CTB) 77 channels flat, Vo=44dBmV. Measured @ Channel 78	-57 dB Max	N/A
Cross Modulation (XMOD) 77 channels flat, Vo=44dBmV. Measured @ Channel 2	-57 dB Max	N/A
Composite 2 <sup>nd</sup> Order (CSO) 77 channels flat, Vo=44dBmV. Measured @ Channel 78	-57 dB Max	N/A
Stability Test for all frequency range where  S21  > 0 dB	0 dB max	< 0

