

### Features

- ◎ 50MHz - 1.05 GHz
- ◎ +26 dBm P<sub>1dB</sub> at 1.05 GHz
- ◎ +43dBm OIP3 at 1.05 GHz
- ◎ 16.8dB Gain at 1.05 GHz
- ◎ 2.1 dB Noise Figure at 1.05 GHz
- ◎ SOT – 89 Package Style

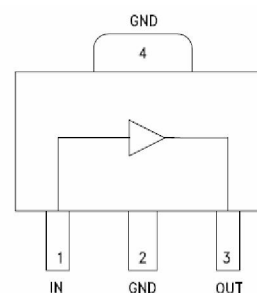
### Description

The *F266* is a general-purpose buffer amplifier that offers high dynamic range in a low-cost surface-mount package. At 1050MHz, the *F266* typically provides 16.8dB of gain, +43dBm Output IP3, and +26dBm P1dB. The *F266* consists of Darlington pair amplifiers using the high reliability InGaP/GaAs HBT process technology and only requires 50MHz-blocking capacitors, a bias resistor, and an inductive RF choke for operation.

### Applications

- ★ PA Driver Amplifier
- ★ CATV / FTTH
- ★ W-LAN / ISM
- ★ Wideband Instrumentation
- ★ IF&RF Applications

### Functional Diagram



### Electrical Characteristics (V<sub>cc</sub>= 8V, T<sub>A</sub> = +25°C, 75 Ω)

Parameter	Min.	Typ.	Max.	Units
Gain				
50MHz~500MHz		17.0		dB
500MHz~1.05GHz		16.8		
Input return Loss				dB
50MHz~500MHz	20	21		
500MHz~1.05 GHz	13	14		
Output return Loss				dB
50MHz~500MHz	20	25		
500MHz~1.05 GHz	23	20		
Output Power for 1 dB Compression (P1dB)				dBm
50MHz~500MHz	26	26		
500MHz~1.05 GHz	26	26		
Output Third Order Intercept (IP3)				dBm
50MHz~500MHz	43	43		
500MHz~1.05 GHz	43	41		
Noise Figure	2.0	2.1		dB
Device Voltage		8		V
Supply Current		125		mA

### Absolute Maximum Ratings

Device Current	125mA
Storage Temperature	-65 to +150°C
Operating Temperature	-55 to +125°C
ESD Sensitivity (HBM)	Class 1C



ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS

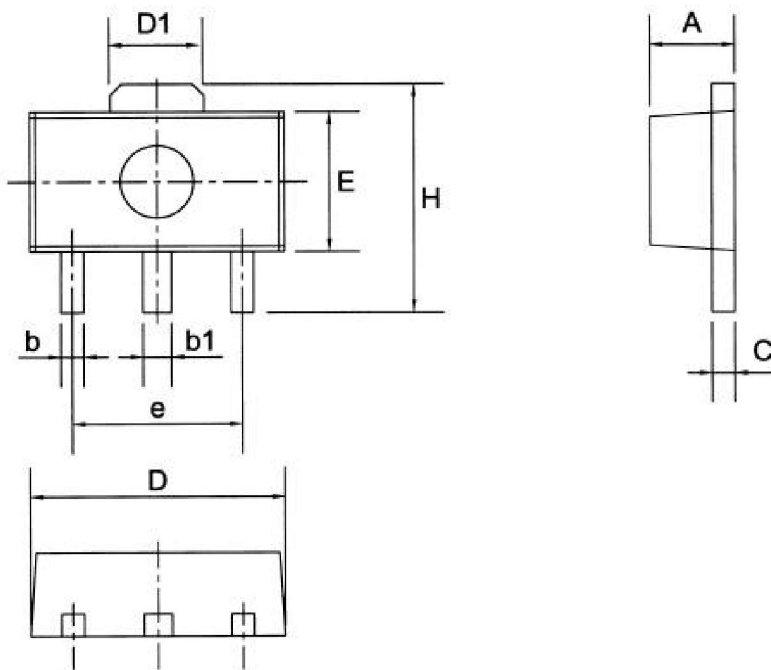
ESD Rating: Class 1C

Value: Passes between 1000V

Test: Human Body Model (HBM)

Standard: JEDEC Standard JESD22-A114

### Outline Drawing



Symbol	Dimensions In Millimeters			Dimensions In Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.30	1.50	1.70	0.051	0.059	0.067
b	0.25	0.40	0.55	0.010	0.016	0.022
b1	0.40	0.50	0.60	0.016	0.020	0.024
C	0.30	0.40	0.50	0.012	0.016	0.020
D	4.30	4.50	4.70	0.169	0.177	0.185
D1	1.45	1.65	1.85	0.057	0.065	0.073
E	2.30	2.50	2.70	0.091	0.098	0.106
e	2.90	3.00	3.10	0.114	0.118	0.122
H	3.90	4.10	4.30	0.154	0.161	0.169

### Pin Descriptions

Pin number	Function	Description
1	RF <sub>IN</sub>	This pin is DC coupled; An off chip DC blocking capacitor is required.
2, 4	GND	These pins and package bottom must be connected to RF/DC ground.
3	RF <sub>OUT</sub>	RF output and DC Bias for the output stage.

### Application Circuit

