

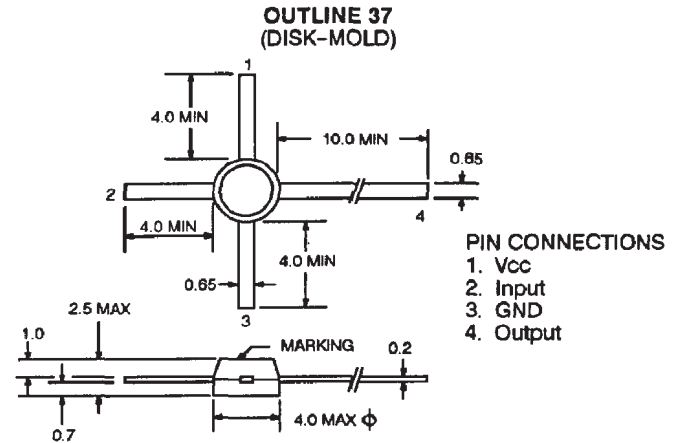
FEATURES

- **BROAD FREQUENCY RESPONSE:** To 1200 MHz TYP at 3 dB Down
- **HIGH POWER GAIN:** 19 dB TYP at $f = 500$ MHz
- **LOW VOLTAGE OPERATION:** $V_{CC} = 5$ V
- **SMALL PACKAGE**

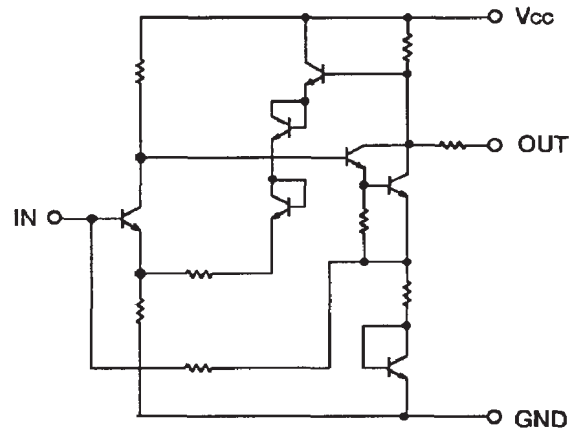
DESCRIPTION

The UPC1651G is a silicon monolithic integrated circuit especially designed as a wide band amplifier covering the HF band through UHF band.

OUTLINE DIMENSIONS (Units in mm)



EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS (TA = 25°C)

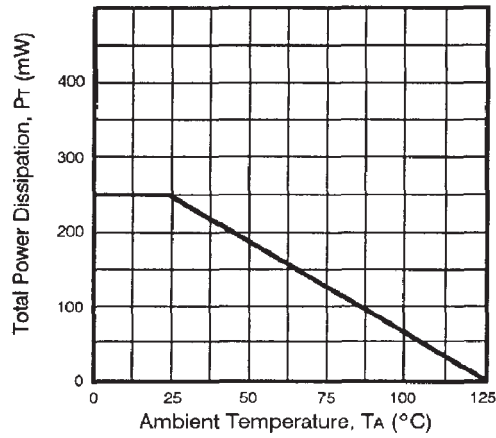
SYMBOLS	PARAMETERS	UNITS	RATINGS
Vcc	Supply Voltage	V	6
Pr	Total Power Dissipation	mW	250
ToP	Operating Temperature	°C	-20 to +75
Tstg	Storage Temperature	°C	-40 to +125

ELECTRICAL CHARACTERISTICS (TA = 25°C)

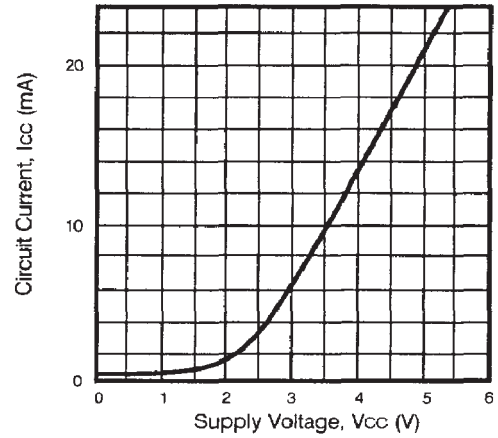
PART NUMBER PACKAGE OUTLINE			UPC1651G 37		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
Icc	Circuit Current at Vcc = 5 V	mA	15	20	25
NF	Noise Figure at Vcc = 5 V, f = 500 MHz	dB		5.5	6.5
BW	Bandwidth at Vcc = 5 V, 3 dB down	MHz	1000	1200	
POUT	Maximum Output Level at Vcc = 5 V, f = 500 MHz	dBm	3	5	
S21	Power Gain at Vcc = 5 V, f = 500 MHz	dB	16	19	
S11	Input Return Loss at Vcc = 5 V, f = 500 MHz	dB		15	
S22	Output Return Loss at Vcc = 5 V, f = 500 MHz	dB		10	
S12	Isolation at Vcc = 5 V, f = 500 MHz	dB	20	24	

TYPICAL PERFORMANCE CHARACTERISTICS (T_A = 25°C)

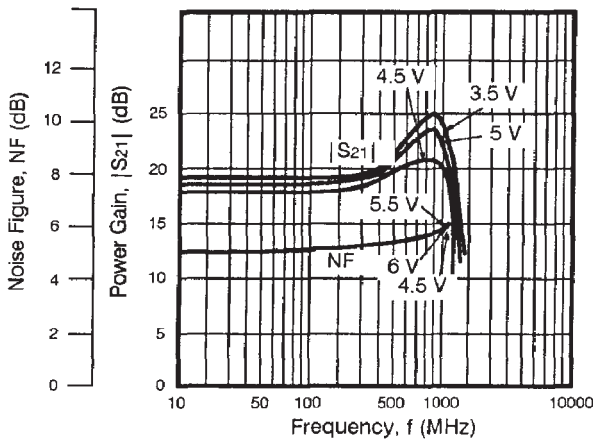
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



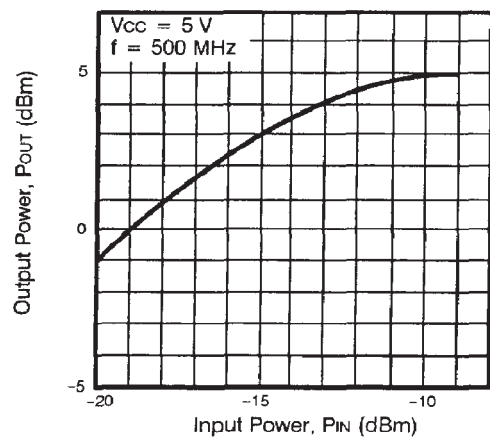
CIRCUIT CURRENT vs. SUPPLY VOLTAGE



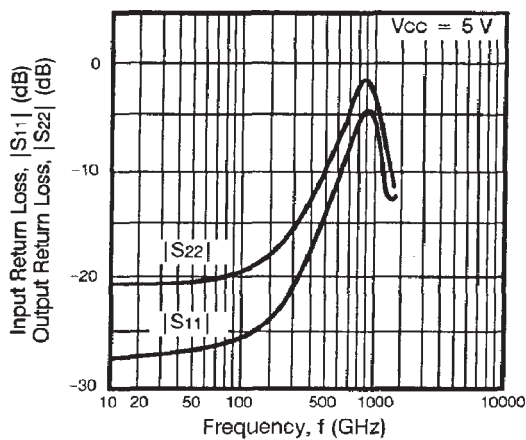
NOISE FIGURE AND POWER GAIN vs. FREQUENCY



INPUT POWER vs. OUTPUT POWER



INPUT AND OUTPUT RETURN LOSS vs. FREQUENCY



ISOLATION vs. FREQUENCY

