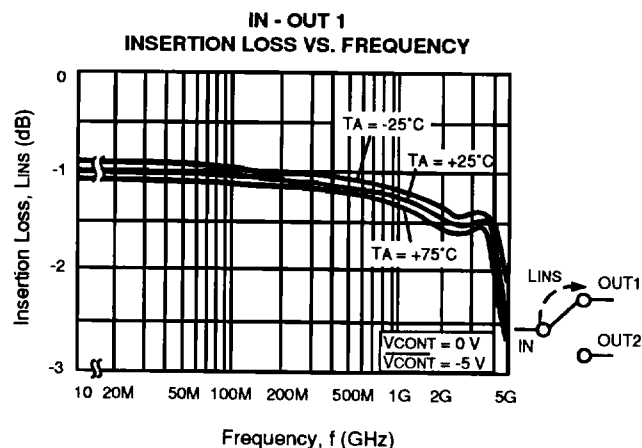


FEATURES

- **WIDE OPERATING FREQUENCY BAND:**
DC to 3.4 GHz
- **SWITCHING SPEED 5 ns TYPICAL**
- **HERMETICALLY SEALED PACKAGE ASSURES HIGH RELIABILITY**

DESCRIPTION

UPG107B is an S-Band SPDT (Single Pole Double Throw) GaAs FET switch which was developed for radar application. The device can operate from DC to 3.4 GHz. It is housed in an 8 pin high reliability ceramic flat package that is easy to install. It can be used in wide-band switching applications.



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

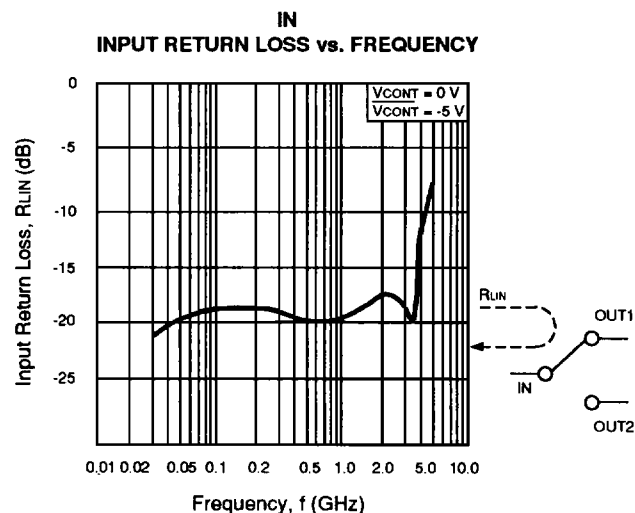
PART NUMBER PACKAGE OUTLINE					UPG107B BF08		
SYMBOLS	CHARACTERISTICS	TEST CONDITIONS		UNITS	MIN	TYP	MAX
LINS	Insertion Loss	$\frac{V_{CONT} = 0\text{ V}}{V_{CONT} = -5\text{ V}}$ or $\frac{V_{CONT} = -5\text{ V}}{V_{CONT} = 0\text{ V}}$	f = DC to 3.4 GHz	dB		1.4	1.7
RLIN	Input Return Loss			dB	14	17	
RLOUT(T)	Output Return Loss (through)			dB	10	13	
RLOUT(O)	Output Return Loss (open)			dB	8	9	
P1dB	Output Power at 1 dB Gain Compression Point			dBm		+25	
tsw	Switching Speed			ns		5	
ISOL	Isolation		f = 3.4 GHz	dB	26	30	
			f = 1 GHz	dB	35	40	

ABSOLUTE MAXIMUM RATINGS¹ (TA = 25°C)

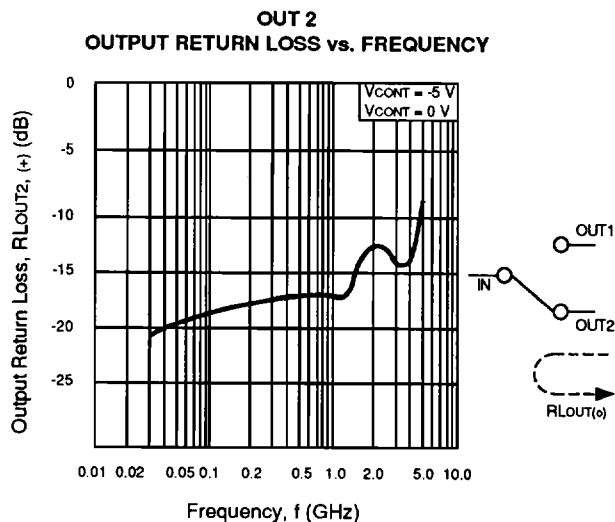
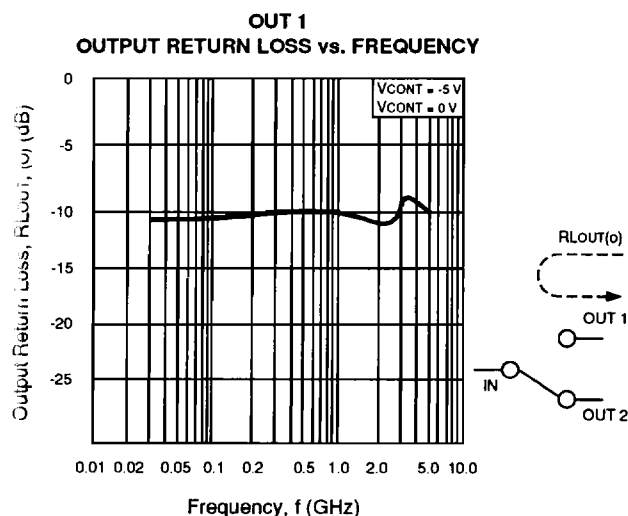
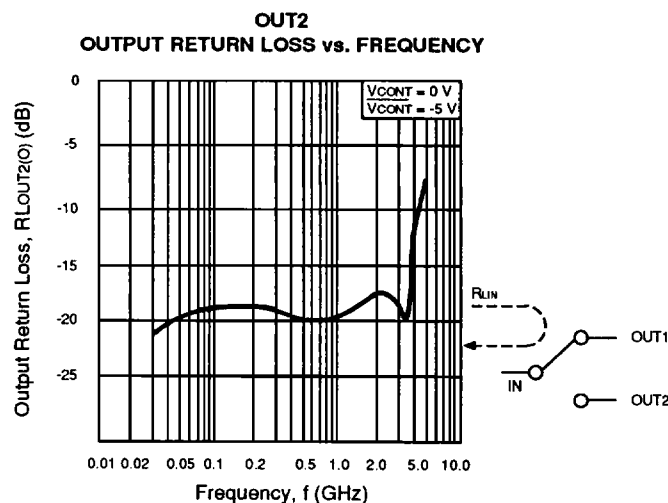
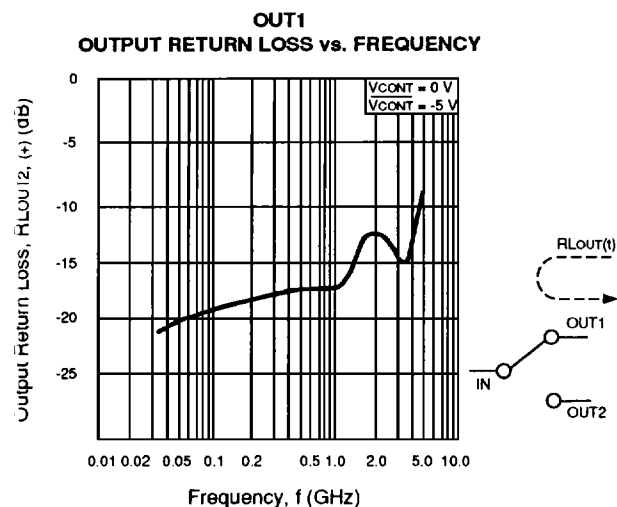
SYMBOLS	PARAMETERS	UNITS	RATINGS
VCONT	Control Voltage	V	-6 to +0.6
PIN	Input Power	dBm	+33
PT2	Total Power Dissipation	W	1.5
Tc	Operating Case Temperature Range	°C	-65 to +125
TSTG	Storage Temperature	°C	-65 to +175

Notes:

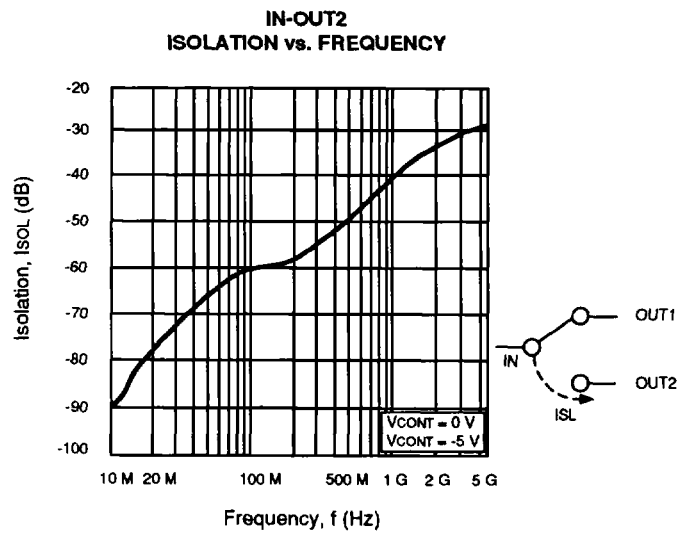
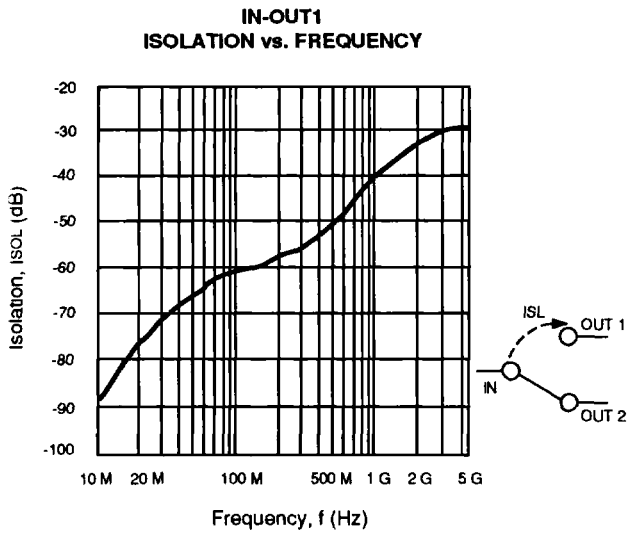
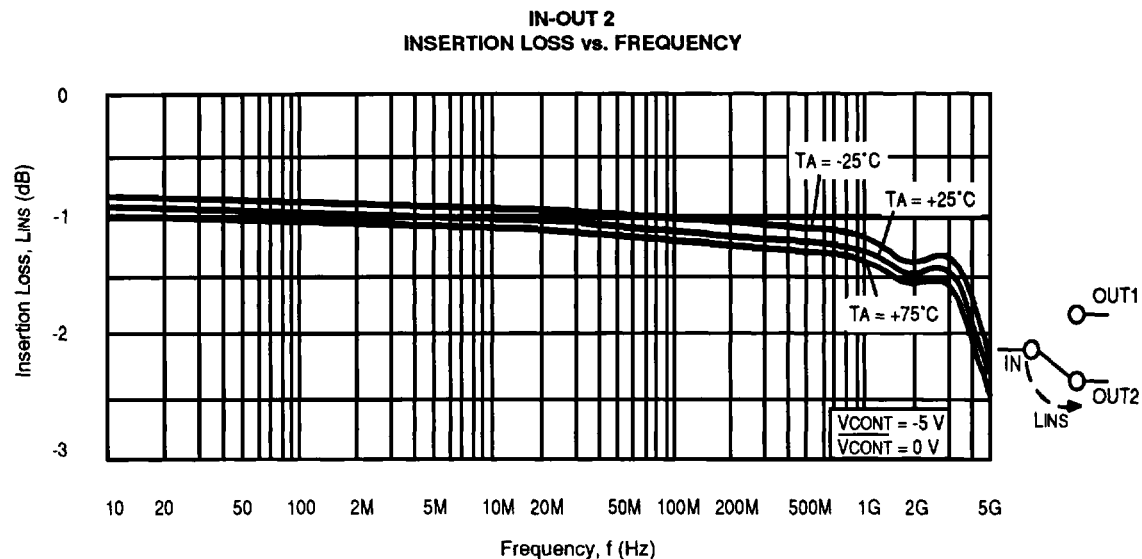
1. Operation in excess of any one of these parameters may result in permanent damage.
2. Tc ≤ 125°C



TYPICAL PERFORMANCE CURVES (TA = 25°C)

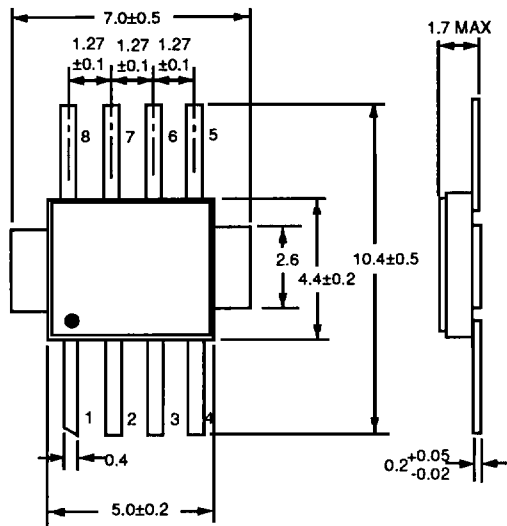


TYPICAL PERFORMANCE CURVES (TA = 25°C)



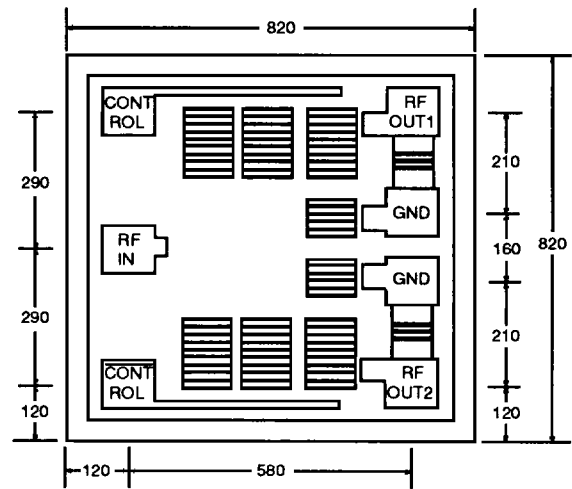
OUTLINE DIMENSIONS (Units in mm)

UPG107B
PACKAGE OUTLINE BF08

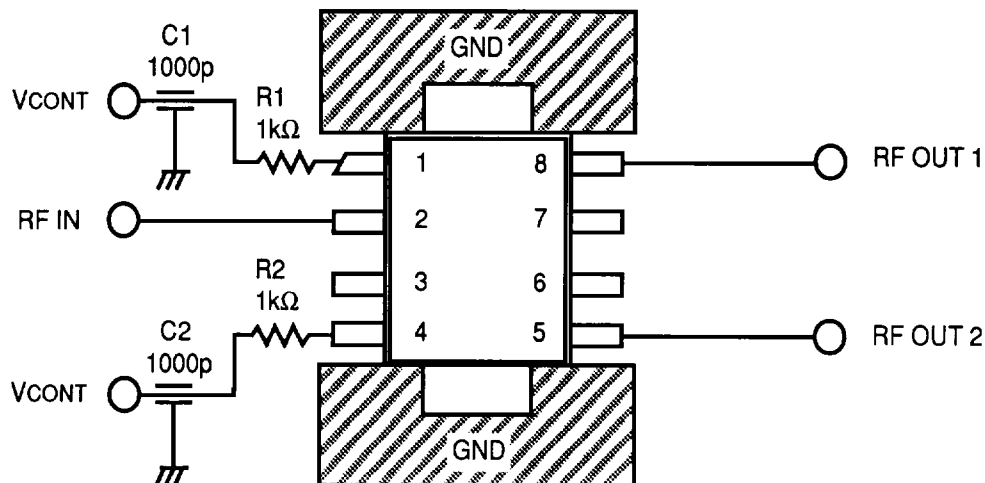


- | | |
|----------|---------|
| 1. VCONT | 5. OUT2 |
| 2. In | 6. GND |
| 3. NC | 7. GND |
| 4. VCONT | 8. OUT1 |
- Flange: GND

UPG107P (CHIP)



APPLICATION CIRCUIT



Notes:

1. C1 and C2 are de-coupling capacitors.
2. R1 and R2 are chip resistors. (They should be mounted as close to the package leads as possible.)