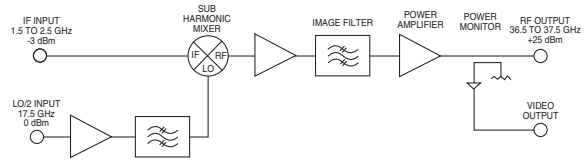


# INTEGRATED UPCONVERTER AND POWER AMPLIFIER

## MODEL: SYSTX3638

### FEATURES

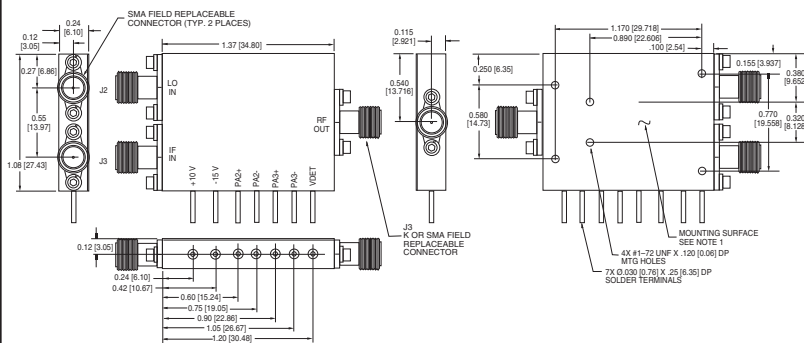
- IF frequency range ..... 1.5 to 2.5 GHz
- RF frequency range..... 36.5 to 37.5 GHz
- Fundamental leakage ..... -50 dBm
- Packaging..... Hermetically sealed



### ELECTRICAL SPECIFICATIONS

| INPUT PARAMETERS         | CONDITION        | UNITS | MIN. | TYP. | MAX. |
|--------------------------|------------------|-------|------|------|------|
| IF frequency range       |                  | GHz   | 1.5  |      | 2.5  |
| IF VSWR                  | 50 ohm reference | Ratio |      | 2:1  |      |
| Input power              |                  | dBm   |      | 0    |      |
| LO frequency range       |                  | GHz   |      | 17.5 |      |
| LO power range           |                  | dBm   | -2   |      | +2   |
| LO VSWR                  | 50 ohm reference | Ratio |      | 2:1  |      |
| V+ bias voltage (Note 1) | @ 1,600 mA max.  |       |      | +10  |      |
| V- bias voltage (Note 1) | @ 60 mA max.     |       | -9   |      | -15  |
| TRANSFER CHARACTERISTICS | CONDITION        | UNITS | MIN. | TYP. | MAX. |
| Conversion gain          |                  | dB    | 30   |      |      |
| Fundamental LO leakage   | @ RF output      | dBm   |      |      | -50  |
| Leakage LO X2            | @ RF output      | dBm   |      |      | 0    |
| Leakage (with Option 1)  |                  | dBm   |      |      | -60  |
| OUTPUT PARAMETERS        | CONDITION        | UNITS | MIN. | TYP. | MAX. |
| RF frequency range       |                  | GHz   | 36.5 |      | 37.5 |
| RF VSWR                  | 50 ohm reference | Ratio |      | 2:1  |      |

### OUTLINE DRAWING



NOTE: Plus external bias board.  
All dimensions shown in brackets [ ] are in millimeters.

### MAXIMUM RATINGS

Specification temperature ..... +25°C  
Operating temperature ..... -55 to +65°C  
Storage temperature..... -65 to +95°C

### Options

BPF 1. External RF bandpass filter

NOTE 1: Supplied with external voltage regulator board, with bias protection circuit.) PA2 + and -, and PA3 + and - voltages are derived from the +10, and -12 V supplies on the regulator board.

Option 2: Supplied with all regulators internal to device—no external board.

NOTE: Test data supplied at 25°C; output power, output frequency spectrum, bias current and voltage.