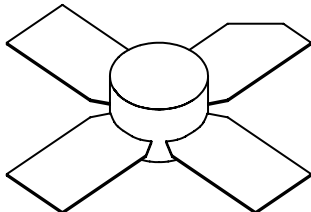


UTV005P

0.5 Watts, 20 Volts, Class A
UHF Television - Band IV & V

| | |
|--|--|
| <p>GENERAL DESCRIPTION</p> <p>The UTV005P is a COMMON EMITTER transistor capable of providing 0.5 Watts Peak, Class A, RF Output Power over the band 470 - 860 MHz. Gold Metalization and Diffused Ballasting are used to provide high reliability and supreme ruggedness.</p> | <p>CASE OUTLINE 55FU-1</p>  |
| <p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation Device Dissipation @ 25°C 8 W</p> <p>Maximum Voltage and Current Collector to Base Voltage (BV_{ces}) 45 V Emitter to Base Voltage (BV_{ebo}) 4.0 V Collector to Emitter Voltage (BV_{ceo}) 3.5 V Collector Current (I_c) 750 mA</p> <p>Maximum Temperatures Storage Temperature -65 to +150 °C Operating Junction Temperature +200 °C</p> | |

ELECTRICAL CHARACTERISTICS @ 25°C

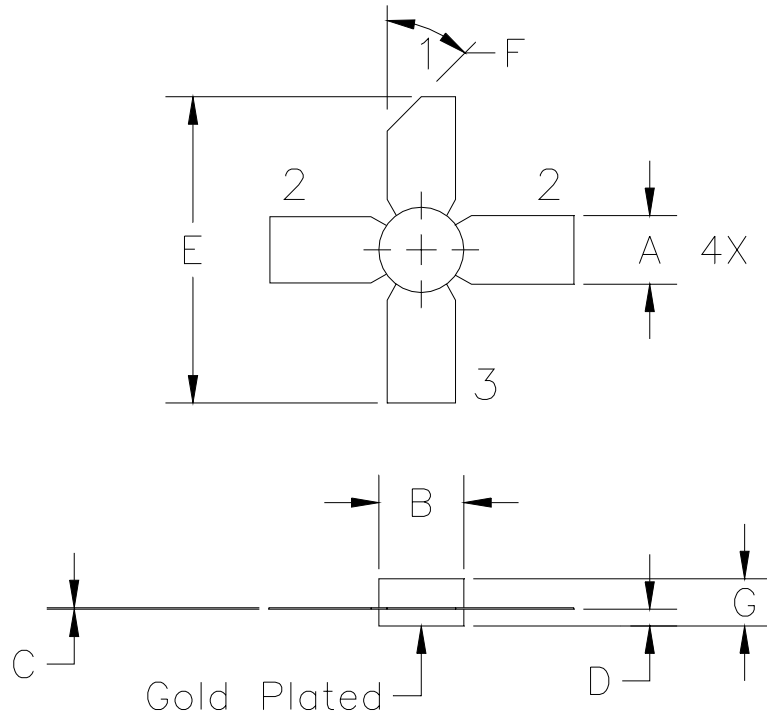
| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|------------------|----------------------------|----------------------------|-----|-----|------|-------|
| P _{out} | Power Output – Peak synch | F = 470-860 MHz | 0.5 | | | W |
| P _{in} | Power Input | V _{cc} = 20 Volts | | | 50 | mW |
| P _g | Power Gain | I _c = 220 mA | | 11 | | dB |
| IMD | Intermodulation Distortion | P _{ref} = 0.5 W | | -60 | | dBc |
| VSWR | Load Mismatch Tolerance | F = 860 MHz | | | 10:1 | |

FUNCTIONAL CHARACTERISTICS @ 25°C

| | | | | | | |
|------------------------------|--------------------------------|---|-----|-----|----|------|
| BV _{ceo} | Emitter to Base Breakdown | I _e = 20 mA | 24 | | | V |
| BV _{ces} | Collector to Emitter Breakdown | I _c = 10 mA | 45 | | | V |
| BV _{ebo} | Emitter to Base Breakdown | I _e = 1 mA | 3.5 | | | V |
| h _{FE} | DC – Current Gain | V _{ce} = 5V, I _c = 100 mA | 20 | | | |
| C _{ob} | Capacitance | | | 5.0 | | pF |
| θ _{jc} ¹ | Thermal Resistance | | | | 22 | °C/W |

Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 MHz

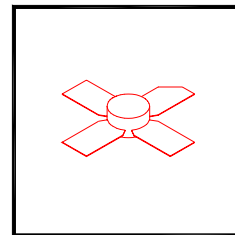
European test method, Vision = - 8dB, Sideband= - 16dB, Sound = -7 dB



STYLE 1:
 PIN1 = COLLECTOR
 2 = BASE (2X)
 3 = EMITTER

STYLE 2:
 PIN1 = COLLECTOR
 2 = EMITTER (2X)
 3 = BASE

| DIM | MILLIMETER | ±TOL | INCHES | ±TOL |
|-----|------------|------|----------|------|
| A | 5.71 | .13 | .225 | .005 |
| B | 7.11 DIA | .13 | .280 DIA | .005 |
| C | 0.13 | .02 | .005 | .001 |
| D | 1.40 | .13 | .055 | .005 |
| E | 25.53 | .64 | 1.005 | .025 |
| F | 45° | 5° | 45° | 5° |
| G | 3.94 | REF | .155 | REF |



GHZ TECHNOLOGY
 RF - MICROWAVE SILICON POWER TRANSISTORS

DWG NO.

55FU