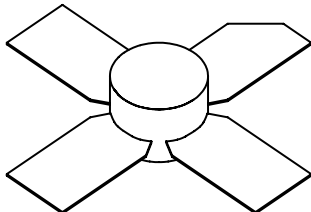


# UTV005P

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

<p><b>GENERAL DESCRIPTION</b></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><b>CASE OUTLINE</b> <b>55FU-1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p><b>Maximum Power Dissipation</b> Device Dissipation @ 25°C                      8 W</p> <p><b>Maximum Voltage and Current</b> Collector to Base Voltage (BV<sub>ces</sub>)              45 V Emitter to Base Voltage (BV<sub>ebo</sub>)                4.0 V Collector to Emitter Voltage (BV<sub>ceo</sub>)          3.5 V Collector Current (I<sub>c</sub>)                              750 mA</p> <p><b>Maximum Temperatures</b> Storage Temperature                                -65 to +150 °C Operating Junction Temperature                +200 °C</p>	

## ELECTRICAL CHARACTERISTICS @ 25°C

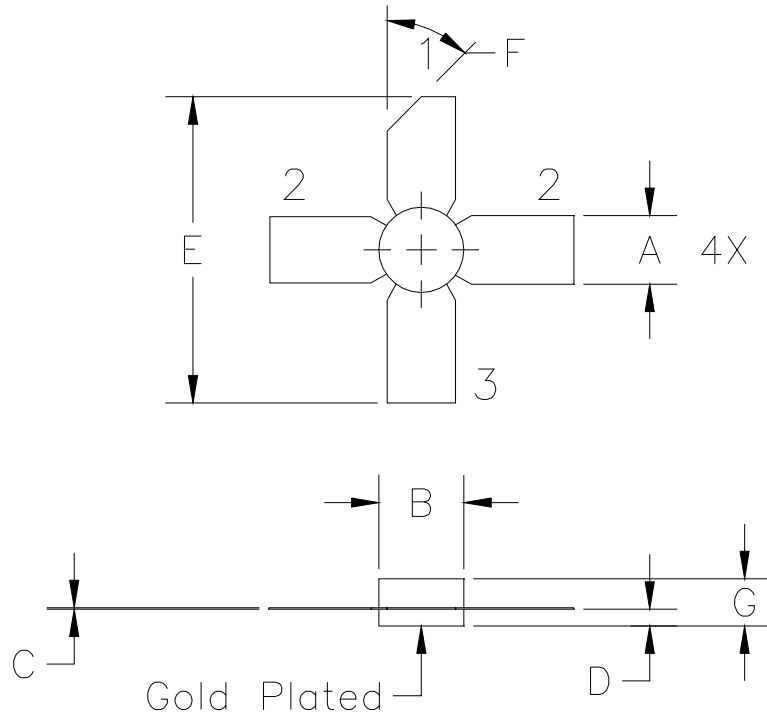
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P <sub>out</sub>	Power Output – Peak synch	F = 470-860 MHz	0.5			W
P <sub>in</sub>	Power Input	V <sub>cc</sub> = 20 Volts			50	mW
P <sub>g</sub>	Power Gain	I <sub>c</sub> = 220 mA		11		dB
IMD	Intermodulation Distortion	P <sub>ref</sub> = 0.5 W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

## FUNCTIONAL CHARACTERISTICS @ 25°C

BV <sub>ceo</sub>	Emitter to Base Breakdown	I <sub>e</sub> = 20 mA	24			V
BV <sub>ces</sub>	Collector to Emitter Breakdown	I <sub>c</sub> = 10 mA	45			V
BV <sub>ebo</sub>	Emitter to Base Breakdown	I <sub>e</sub> = 1 mA	3.5			V
h <sub>FE</sub>	DC – Current Gain	V <sub>ce</sub> = 5V, I <sub>c</sub> = 100 mA	20			
C <sub>ob</sub>	Capacitance			5.0		pF
θ <sub>jc</sub> <sup>1</sup>	Thermal Resistance				22	°C/W

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

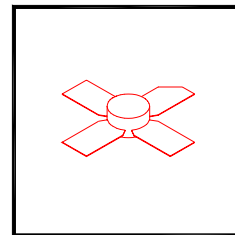
European test method, Vision = - 8dB, Sideband= - 16dB, Sound = -7 dB



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