ADVANCED POWER TECHNOLOGY RF®

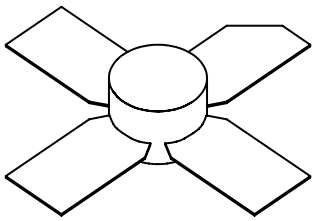
UTV005P

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

GENERAL DESCRIPTION

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.

CASE OUTLINE
55FU-1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @ 25°C	8	W

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

Maximum Temperatures

Storage Temperature	-65 to +150	°C
Operating Junction Temperature	+200	°C

ELECTRICAL CHARACTERISTICS @ 25°C

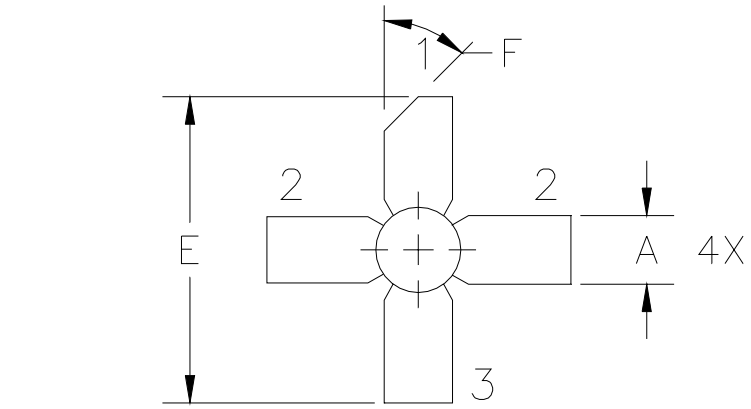
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output – Peak synch	F = 470-860 MHz	0.5			W
P_{in}	Power Input	V_{cc} = 20 Volts			50	mW
P_g	Power Gain	I_c = 220 mA		11		dB
IMD	Intermodulation Distortion	P_{ref} = 0.5 W		-60		dBc
VSWR	Load Mismatch Tolerance	F = 860 MHz			10:1	

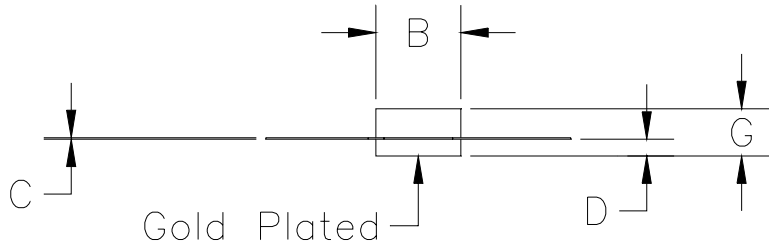
FUNCTIONAL CHARACTERISTICS @ 25°C

BV_{ceo}	Emitter to Base Breakdown	Ie = 20 mA	24			V
BV_{ces}	Collector to Emitter Breakdown	Ic = 10 mA	45			V
BV_{ebo}	Emitter to Base Breakdown	Ie = 1 mA	3.5			V
h_{FE}	DC – Current Gain	Vce = 5V, Ic = 100 mA	20			
C_{ob}	Capacitance			5.0		pF
θjc[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

GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

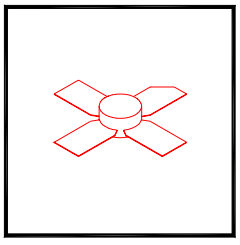




STYLE 1:
PIN1 = COLLECTOR
2 = BASE (2X)
3 = EMITTER

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

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