

UTV020

2 Watts, 25 Volts, Class A UHF Television - Band IV & V

GENERAL DESCRIPTION

The UTV 020 is a COMMON EMITTER transistor capable of providing 2 Watt 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.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 17 Watts

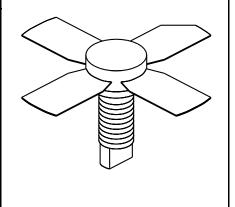
Maximum Voltage and Current

BVcesCollector to Emitter Voltage45 VoltsBVceoCollector to Emitter Voltage25 VoltsBVeboEmitter to Base Voltage4.0 VoltsIcCollector Current1.2 Amps

Maximum Temperatures

Storage Temperature $-65 \text{ to} + 150^{\circ}\text{C}$ Operating Junction Temperature $+200^{\circ}\text{C}$

CASE OUTLINE 55FT, STYLE 2



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout Pin Pg IMD¹ VSWR₁	Power Out - Pk Sync Power Input Power Gain Intermodulation Distortion Load Mismatch Tolerance	F = 470 - 860 MHz Vcc = 25 Volts Ic = 410 mA Pref = 2.0 Watts F = 860 MHz	2.0	12 -60	0.2 30:1	Watts Watts dB dB

LVceo	Collector to Emitter Breakdown	Ic = 40 mA	26			Volts
BVces	Collector to Base Breakdown	Ic = 10 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 1 mA	4.0			Volts
$\mathbf{h}_{ ext{FE}}$	Current Gain	Vce = 5 V, 250mA	10			
Cob	Output Capacitance	Vcb = 20 V, F = 1 MHz		8.0		pF
θјс	Thermal Resistance	$Tc = 25^{\circ}C$			10	°C/W

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

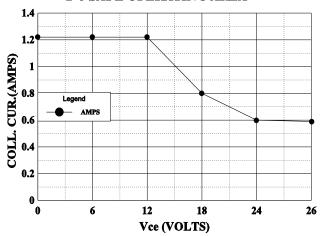
European test method, Vision = -8dB, Sideband= -16dB, Sound = -7 dB

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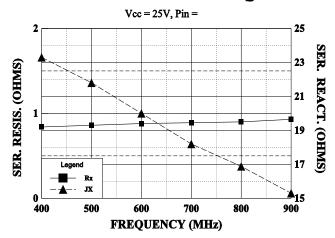
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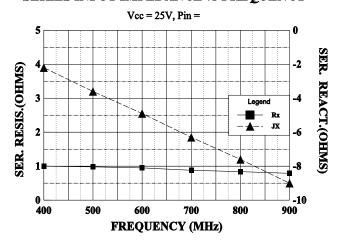
DC SAFE OPERATING AREA



SERIES LOAD IMPEDANCE vs FREQUENCY



SERIES INPUT IMPEDANCE vs FREQUENCY



UTV020

POWER OUTPUT vs POWER INPUT

