

UTV020

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

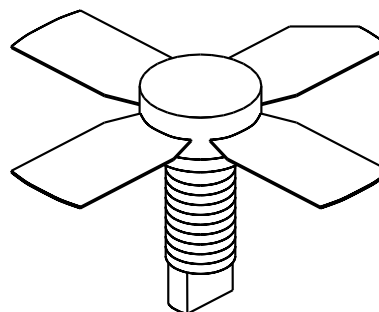
GENERAL DESCRIPTION

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	
BVces Collector to Emitter Voltage	45 Volts
BVceo Collector to Emitter Voltage	25 Volts
BVebo Emitter to Base Voltage	4.0 Volts
Ic Collector Current	1.2 Amps
Maximum Temperatures	
Storage Temperature	- 65 to + 150°C
Operating Junction Temperature	+ 200°C

CASE OUTLINE 55FT, STYLE 2



ELECTRICAL CHARACTERISTICS @ 25 °C

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

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
h_{FE}	Current Gain	Vce = 5 V, 250mA	10			
Cob	Output Capacitance	Vcb = 20 V, F = 1 MHz		8.0		pF
θjc	Thermal Resistance	Tc = 25°C			10	°C/W

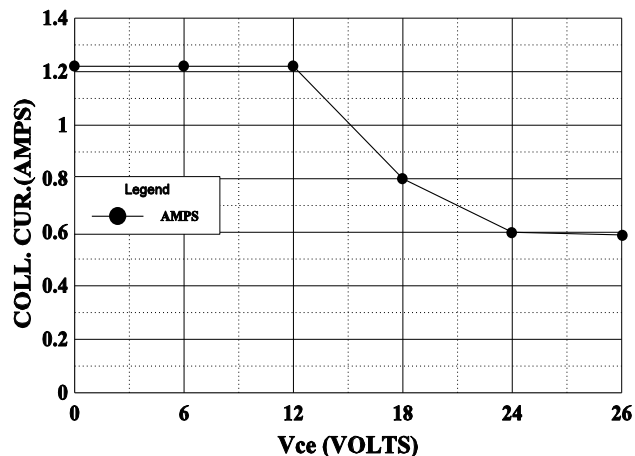
Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 Mhz

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

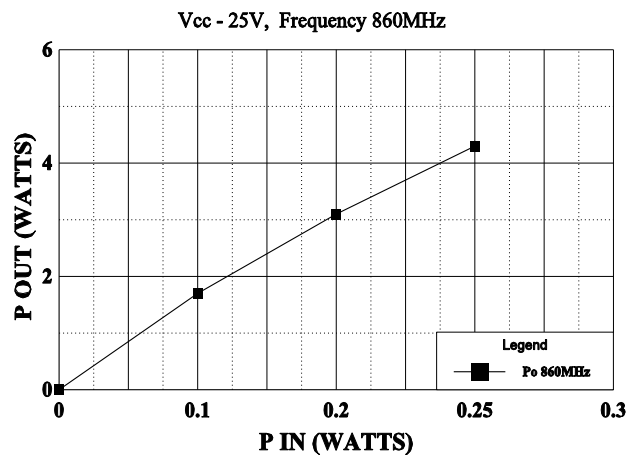
Initial Issue June, 1994

GHz TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHz RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

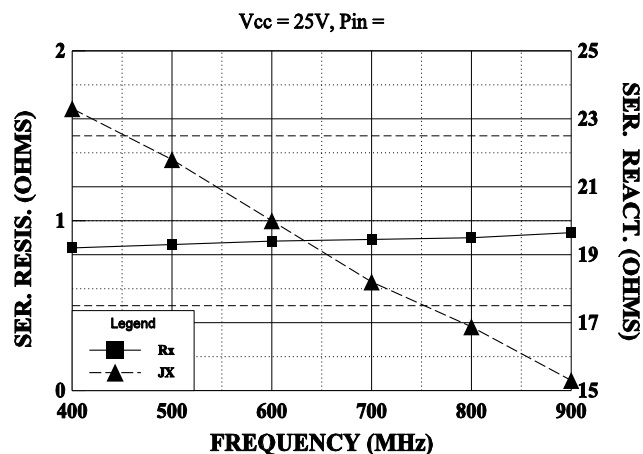
DC SAFE OPERATING AREA



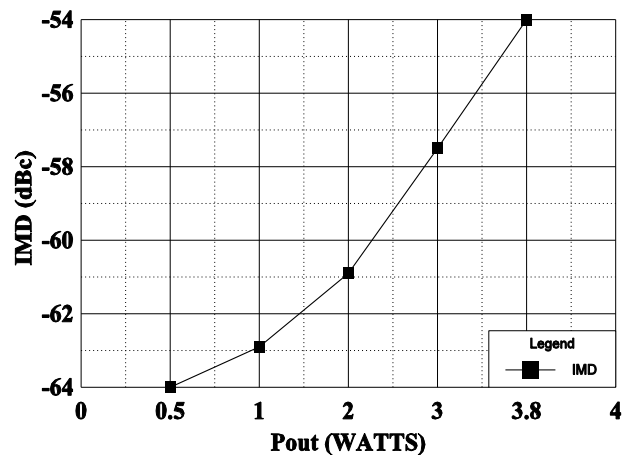
POWER OUTPUT vs POWER INPUT



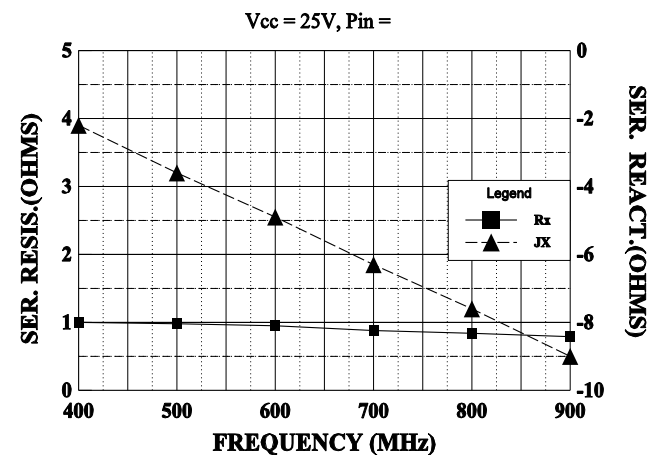
SERIES LOAD IMPEDANCE vs FREQUENCY



IMD vs Pout



SERIES INPUT IMPEDANCE vs FREQUENCY



IMD vs IcQ

