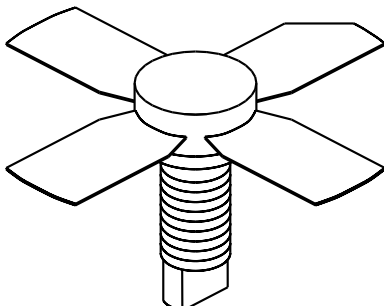


UTV020

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

<p>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.</p>	<p>CASE OUTLINE 55FT, STYLE 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 17 Watts</p> <p>Maximum Voltage and Current</p> <p>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</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to + 150°C Operating Junction Temperature + 200°C</p>	

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

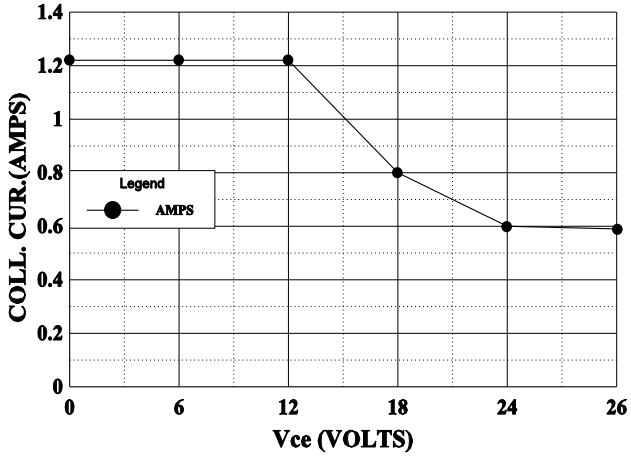
Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 Mhz

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

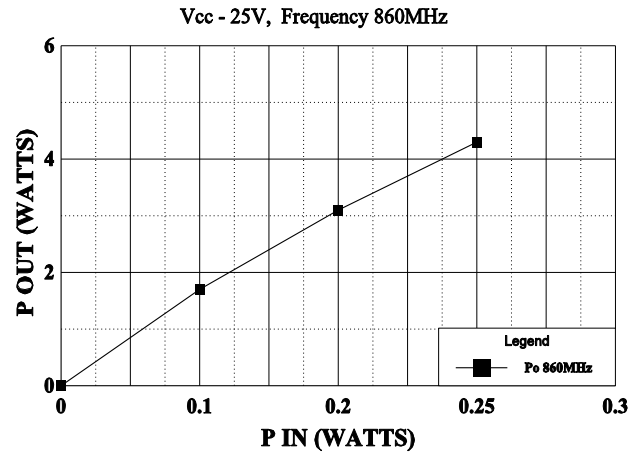
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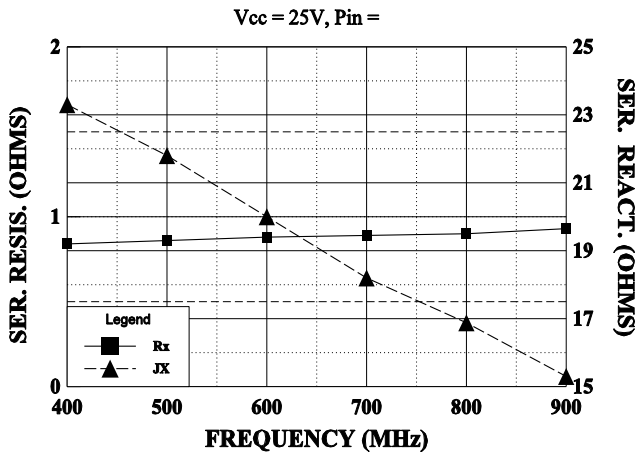
DC SAFE OPERATING AREA



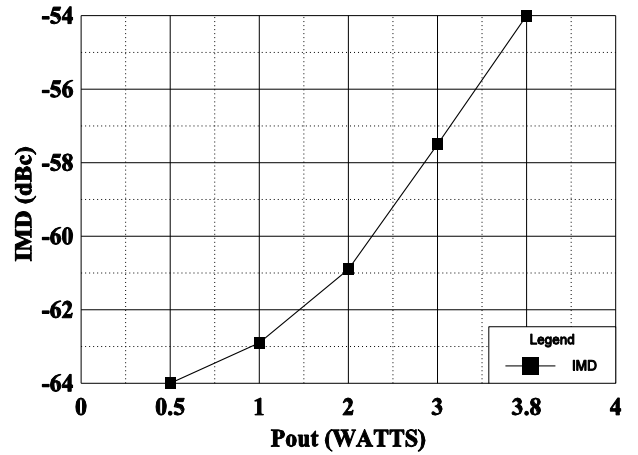
POWER OUTPUT vs POWER INPUT



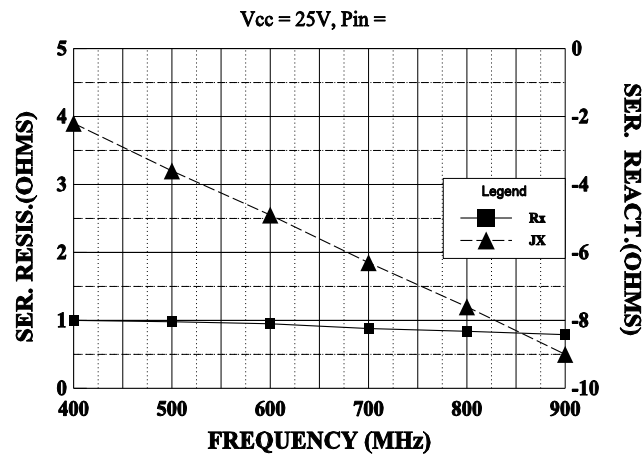
SERIES LOAD IMPEDANCE vs FREQUENCY



IMD vs Pout



SERIES INPUT IMPEDANCE vs FREQUENCY



IMD vs Icq

