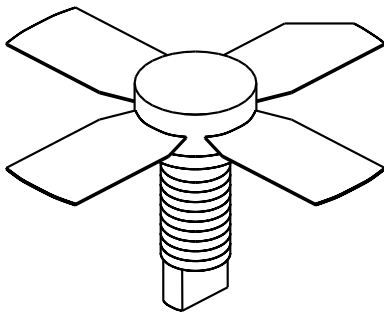


UTV020

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

<p>GENERAL DESCRIPTION</p> <p>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> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 55%;">Collector to Emitter Voltage</td> <td style="width: 30%; text-align: right;">45 Volts</td> </tr> <tr> <td>BVceo</td> <td>Collector to Emitter Voltage</td> <td style="text-align: right;">25 Volts</td> </tr> <tr> <td>BVebo</td> <td>Emitter to Base Voltage</td> <td style="text-align: right;">4.0 Volts</td> </tr> <tr> <td>Ic</td> <td>Collector Current</td> <td style="text-align: right;">1.2 Amps</td> </tr> </table> <p>Maximum Temperatures</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Storage Temperature</td> <td style="text-align: right;">- 65 to + 150°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 200°C</td> </tr> </table>	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	Storage Temperature	- 65 to + 150°C	Operating Junction Temperature	+ 200°C	
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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	

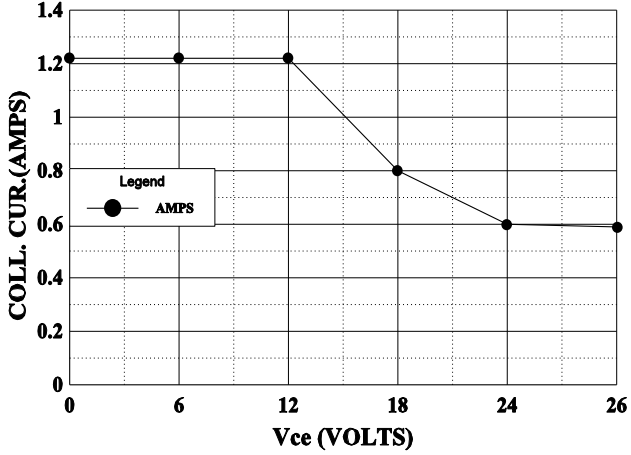
LVceo	Collector to Emitter Breakdown	Ic = 40 mA	26			Volts
BVces	Collector to Base Breakdown	Ic = 10 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 1 mA	4.0			Volts
h_{FE}	Current Gain	Vce = 5 V, 250mA	10			
Cob	Output Capacitance	Vcb = 20 V, F = 1 MHz		8.0		pF
θjc	Thermal Resistance	Tc = 25°C			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

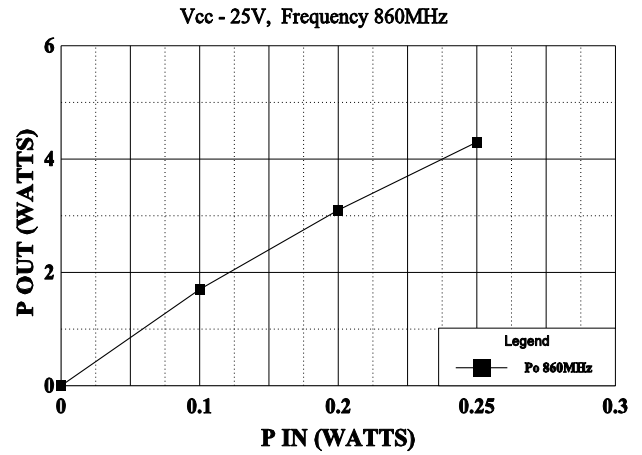
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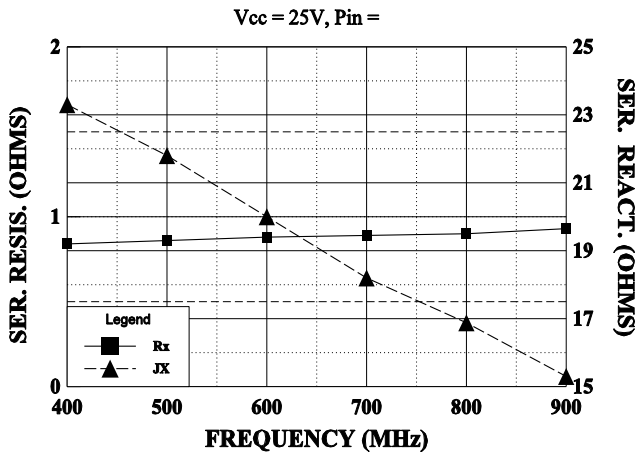
DC SAFE OPERATING AREA



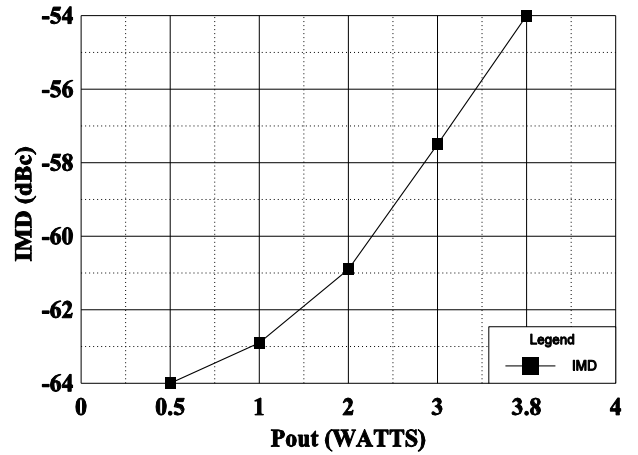
POWER OUTPUT vs POWER INPUT



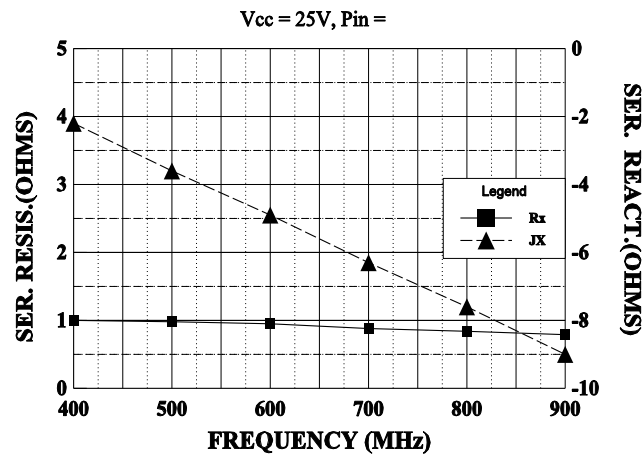
SERIES LOAD IMPEDANCE vs FREQUENCY



IMD vs Pout



SERIES INPUT IMPEDANCE vs FREQUENCY



IMD vs Icq

