

# UTV040

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

## GENERAL DESCRIPTION

The UTV 040 is a COMMON EMITTER transistor capable of providing 4 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 25 Watts

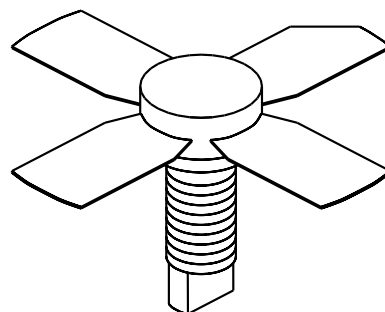
### Maximum Voltage and Current

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	2.5 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
<b>Pout</b>	Power Out - Pk Sync	F = 470 - 860 MHz	4.0			Watts
<b>Pin</b>	Power Input	Vcc = 25 Volts			0.65	Watts
<b>Pg</b>	Power Gain	Ic = 850 mA		9.0		dB
<b>IMD<sup>1</sup></b>	Intermodulation Distortion	Pref = 4.0 Watts		-60		dB
<b>VSWR<sub>1</sub></b>	Load Mismatch Tolerance	F = 860 MHz			30:1	

<b>LVceo</b>	Collector to Emitter Breakdown	Ic = 20 mA	25			Volts
<b>BVces</b>	Collector to Base Breakdown	Ic = 20 mA	45			Volts
<b>BVebo</b>	Emitter to Base Breakdown	Ie = 1 mA	4.0			Volts
<b>h<sub>FE</sub></b>	Current Gain	Vce = 5 V, 500 mA	10	17	100	
<b>Cob</b>	Output Capacitance	Vcb = 25 V, F = 1 MHz	10			pF
<b>θjc</b>	Thermal Resistance	Tc = 25°C			7.0	°C/W

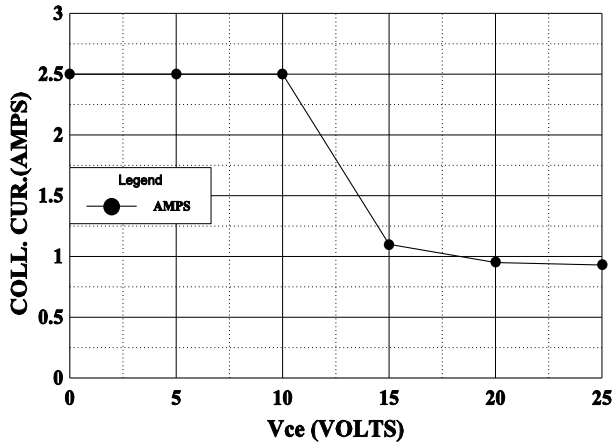
Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 Mhz

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

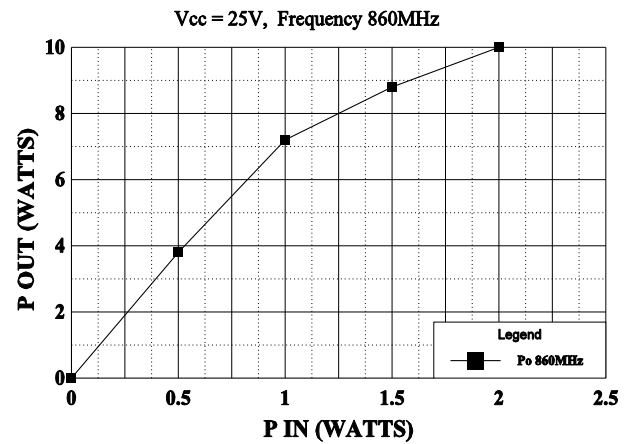
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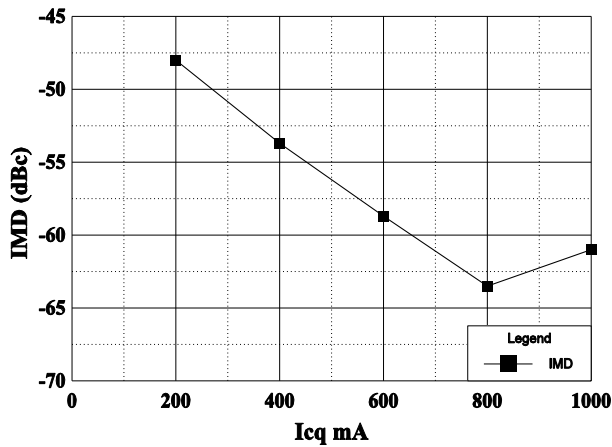
**DC SAFE OPERATING AREA**



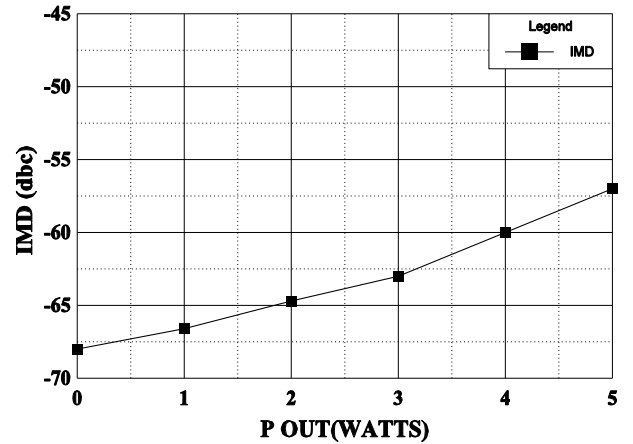
**POWER OUTPUT vs POWER INPUT**



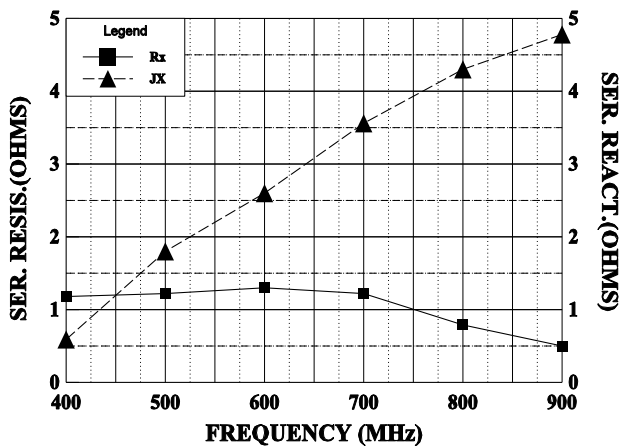
**IMD vs Icq**



**IMD vs P out**



**SERIES INPUT IMPEDANCE vs FREQUENCY**



**SERIES LOAD IMPEDANCE vs FREQUENCY**

