

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

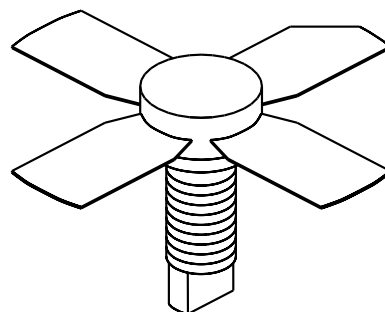
Maximum Voltage and Current

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
Pout	Power Out - Pk Sync	F = 470 - 860 MHz	4.0			Watts
Pin	Power Input	Vcc = 25 Volts			0.65	Watts
Pg	Power Gain	Ic = 850 mA		9.0		dB
IMD¹	Intermodulation Distortion	Pref = 4.0 Watts		-60		dB
VSWR₁	Load Mismatch Tolerance	F = 860 MHz			30:1	

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

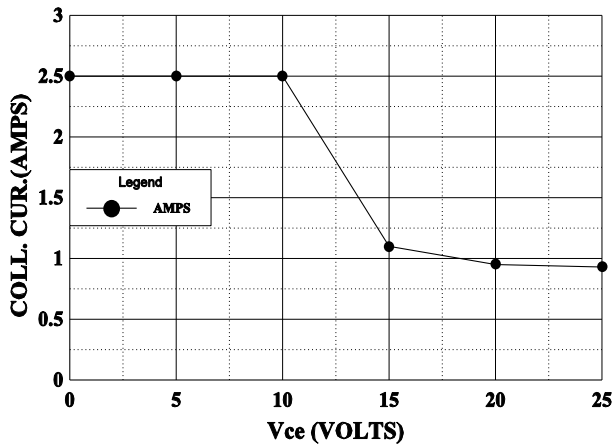
Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 Mhz

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

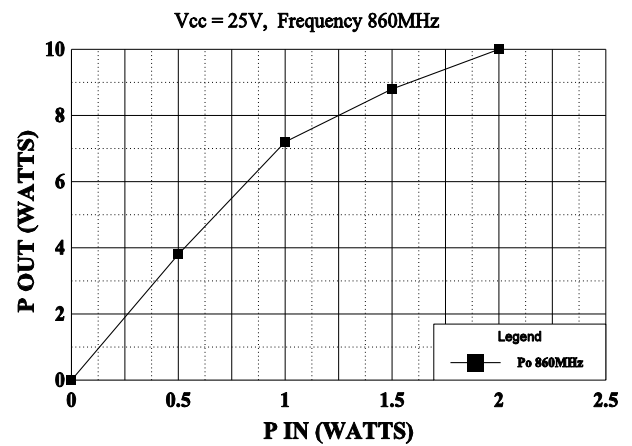
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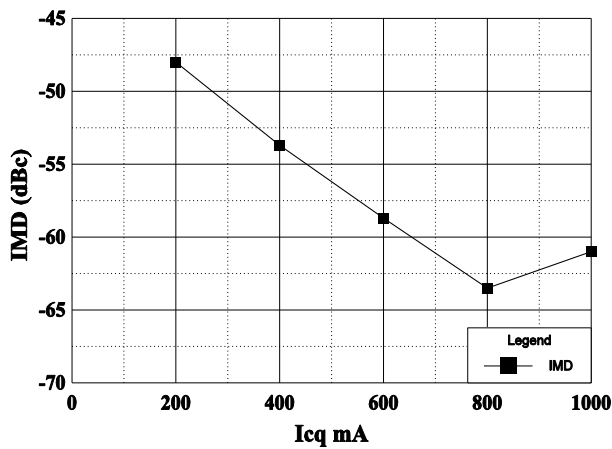
DC SAFE OPERATING AREA



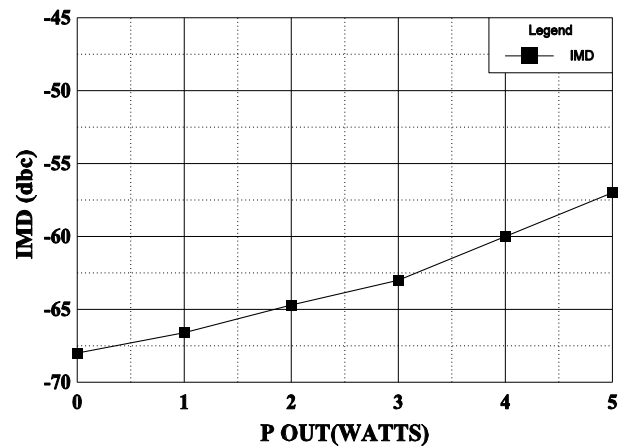
POWER OUTPUT vs POWER INPUT



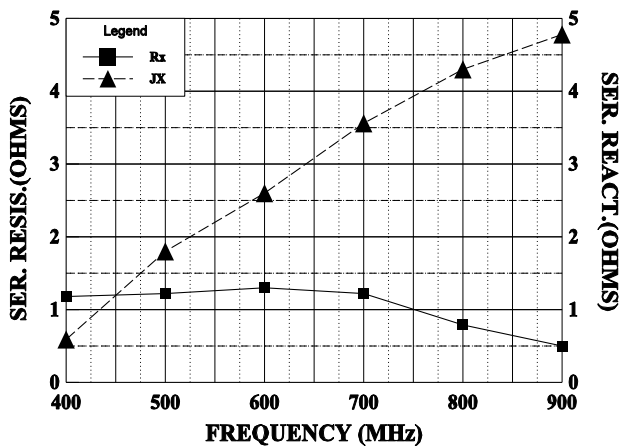
IMD vs Icq



IMD vs P out



SERIES INPUT IMPEDANCE vs FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY

