GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

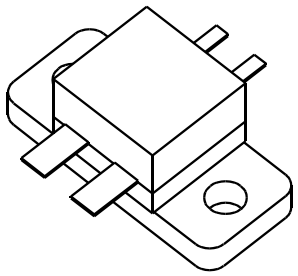
UTV080

8 Watts, 26.5 Volts, Class A
UHF Television - Band IV & V

GENERAL DESCRIPTION

The UTV 080 is a COMMON EMITTER transistor capable of providing 8 Watt Peak, Class A, RF Output Power over the band 470 - 860 MHz. The transistor includes double input prematching for full broadband capability. Gold Metalization and Diffused Ballasting are used to provide high reliability and supreme ruggedness.

CASE OUTLINE
55JV, STYLE 2



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC	65 Watts
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	50 Volts
BVceo Collector to Emitter Voltage	28 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	2.5 Amps
Maximum Temperatures	
Storage Temperature	- 65 to + 150ºC
Operating Junction Temperature	+ 200ºC

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out - Pk Sync	F = 470 - 860 MHz	8			Watts
Pin	Power Input	Vcc = 26.5 Volts			1.0	Watts
Pg	Power Gain	Ic = 1.7 Amps	9	10		dB
IMD[1]	Intermodulation Distortion	Pref = 8 Watts			-58	dB
VSWR$_1$	Load Mismatch Tolerance	F = 860 MHz			3:1	

LVceo[2]	Collector to Emitter Breakdown	Ic = 60 mA	28			Volts
BVces[2]	Collector to Base Breakdown	Ic = 20 mA	50			Volts
BVebo[2]	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
h_{FE}[2]	Current Gain	Vce = 5 V, 500 mA	10			
Cob[2]	Output Capacitance	Vcb = 26 V, F = 1 MHz				pF
θjc	Thermal Resistance	Tc = 25ºC			2.5	ºC/W

Note 1: F1=860 MHz, F2=863.5 MHz, F3=864.5 Mhz
European test method, Vision = - 8dB, Sideband= - 16dB, Sound = -7 dB
2: Per side

Initial Issue June, 1994

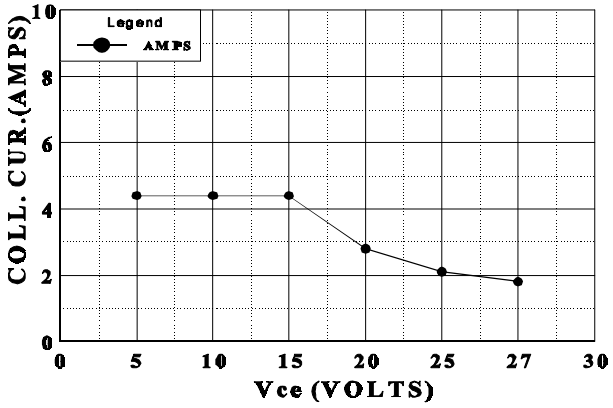
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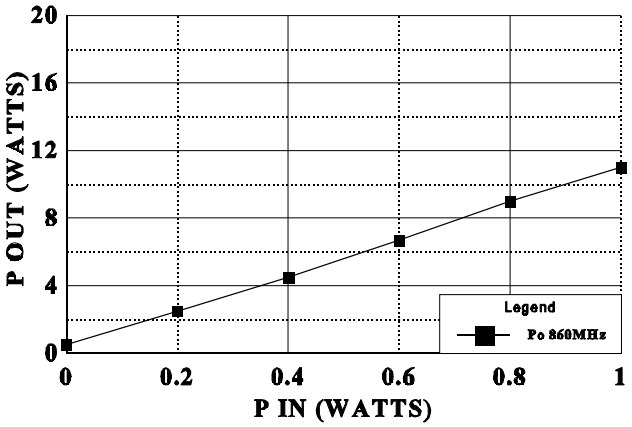
UTV080

DC SAFE OPERATING AREA

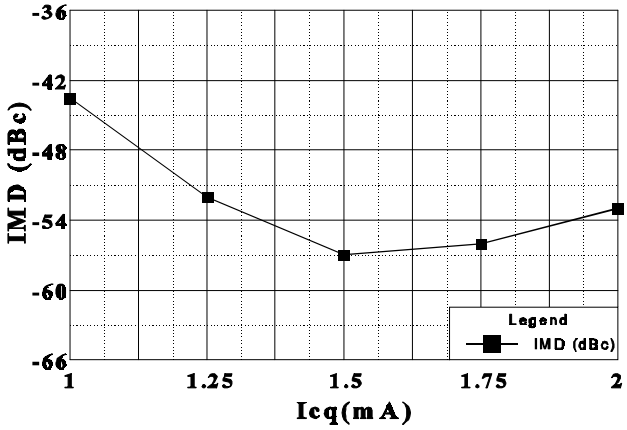


POWER OUTPUT vs POWER INPUT

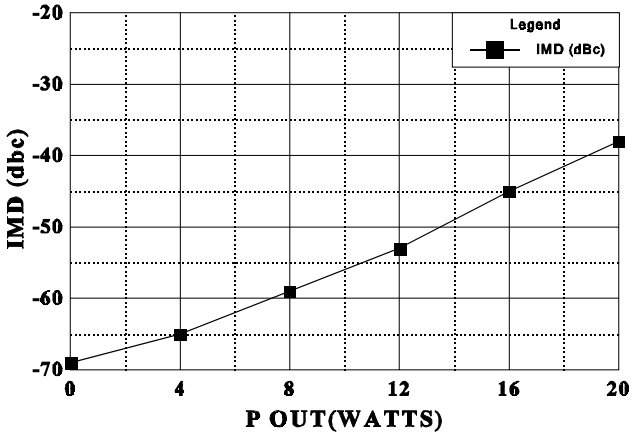
Vcc = 25 Frequency 860MHz



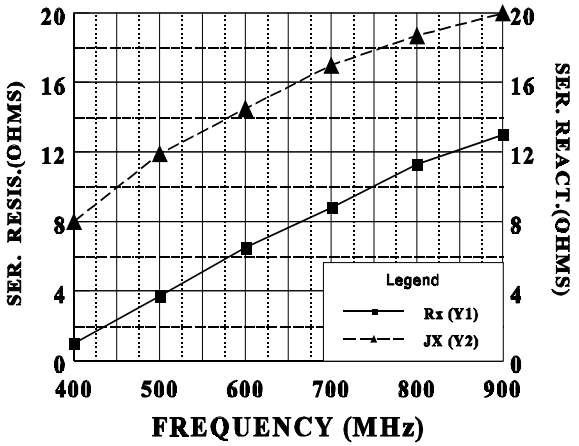
IMD vs Icq



IMD vs P out

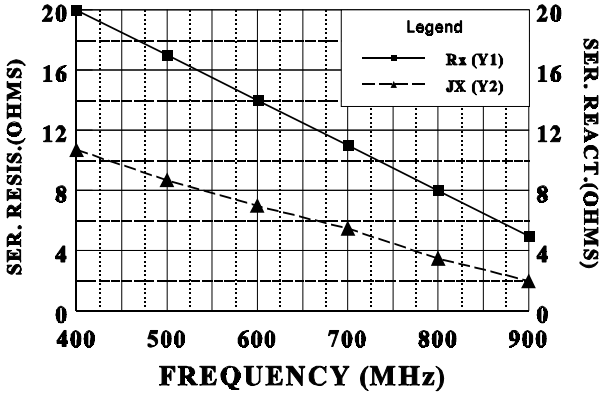


SERIES INPUT IMPEDANCE vs FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc = 25V



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