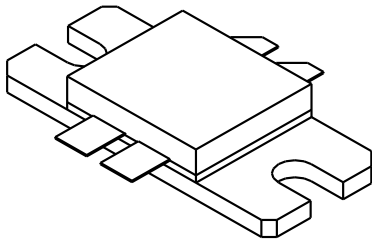


UTV100B

100 Watts Pk, 28 Volt, Class AB
UHF Television - Band IV & V

<p>GENERAL DESCRIPTION The UTV100B is a COMMON EMITTER transistor capable of providing 100 Watt Peak, Class AB, RF Output Power over the band 470 - 860 MHz. The transistor includes double input and output prematching for full broadband capability. Gold Metalization and Diffused Ballasting are used to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55RT, STYLE 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 290 Watts</p> <p>Maximum Voltage and Current</p> <p>BVcbo Collector to Emitter Voltage 65 Volts BVceo Collector to Emitter Voltage 30 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 15 Amps</p> <p>Maximum Temperatures</p> <p>Storage Temperature -40 to + 150°C Operating Junction Temperature + 200 °C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
PldB	Power Out - 1 dB Compression	F = 470 - 860 MHz	100			Watts
Pin	Power Input	Vcc = 28 Volts			12.5	Watts
Po - ref	Power Output - Linear	Icq = 300 mA (total)	25			Watts
Pg	Power Gain - Small Sig		8.5			dB
η	Efficiency		55			%
VSWR	Load Mismatch Tolerance	Pout = 25 Watts Pk	5:1			

* European Test Method, Vision = -8 dB, Sideband = - 16 dB, Sound = - 7 dB

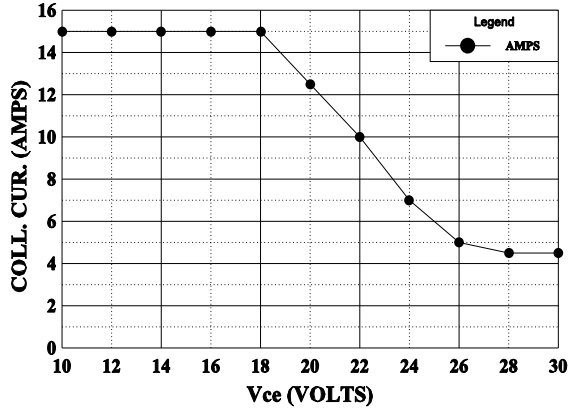
BVceo	Collector to Emitter Breakdown	Ic = 25 mA	30			Volts
BVces	Collector to Emitter Breakdown	Ic = 25 mA	60			Volts
BVebo	Emitter to Base Breakdown	Ie = 30 mA	3.5			Volts
Hfe	Current Gain	Vce = 5 V, Ic = 1 A	20		120	
Cob	Output Capacitance - (each side)*	Vcb = 28V, F=1MHz		47		pF
Rθjc	Thermal Resistance	Tc = 25 °C			0.6	°C/W

* Not measureable due to internal prematch network

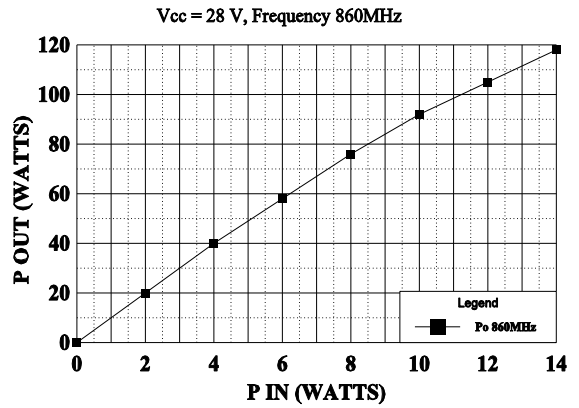
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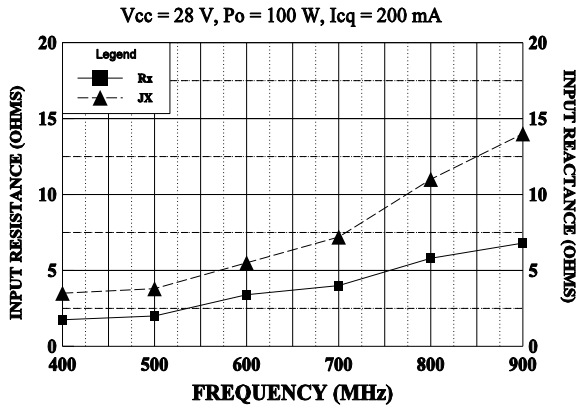
DC SAFE OPERATING AREA



POWER OUTPUT vs POWER INPUT



INPUT IMPEDANCE vs FREQUENCY



LOAD IMPEDANCE vs FREQUENCY

