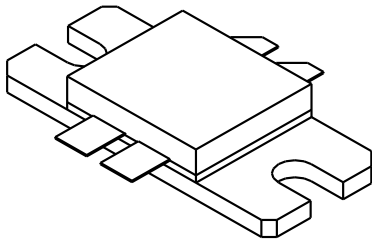


# UTV100B

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

<p><b>GENERAL DESCRIPTION</b> 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><b>CASE OUTLINE</b> <b>55RT, STYLE 2</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">290 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <p>BVcbo Collector to Emitter Voltage <span style="float: right;">65 Volts</span>          BVceo Collector to Emitter Voltage <span style="float: right;">30 Volts</span>          BVebo Emitter to Base Voltage <span style="float: right;">3.5 Volts</span>          Ic Collector Current <span style="float: right;">15 Amps</span></p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature <span style="float: right;">-40 to + 150°C</span>          Operating Junction Temperature <span style="float: right;">+ 200 °C</span></p>	

## ELECTRICAL CHARACTERISTICS @ 25 °C

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

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

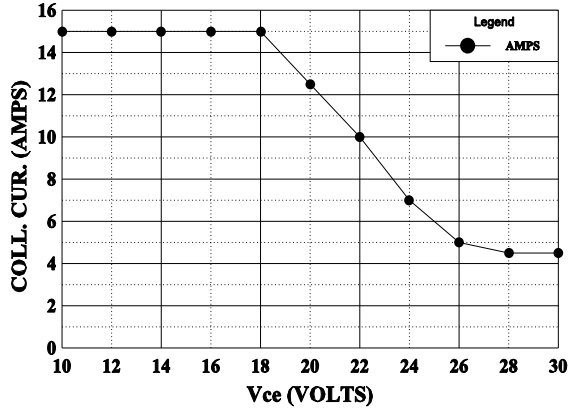
<b>BVceo</b>	Collector to Emitter Breakdown	Ic = 25 mA	30			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 25 mA	60			Volts
<b>BVebo</b>	Emitter to Base Breakdown	Ie = 30 mA	3.5			Volts
<b>Hfe</b>	Current Gain	Vce = 5 V, Ic = 1 A	20		120	
<b>Cob</b>	Output Capacitance - (each side)*	Vcb = 28V,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

\* Not measureable due to internal prematch network

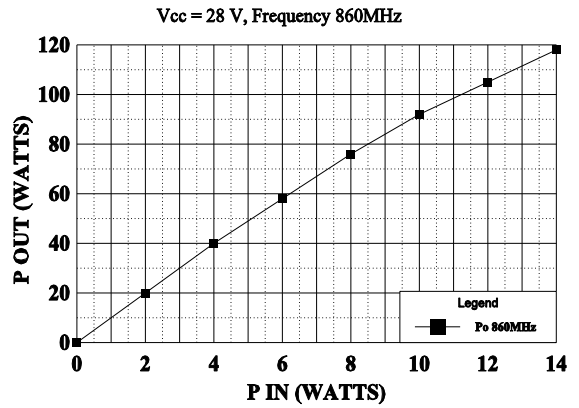
Issue August 1996

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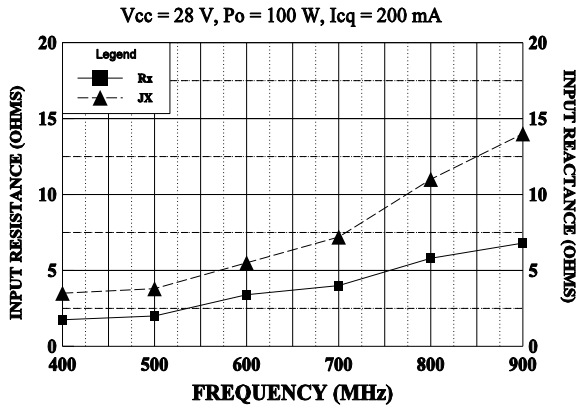
**DC SAFE OPERATING AREA**



**POWER OUTPUT vs POWER INPUT**



**INPUT IMPEDANCE vs FREQUENCY**



**LOAD IMPEDANCE vs FREQUENCY**

