

TPR 1000

1000 Watts, 45 Volts, Pulsed
Avionics 1090 MHz

GENERAL DESCRIPTION

The TPR 1000 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1090 MHz. The device has gold thin-film metallization for proven highest MTTF. The transistor includes input returns for **fast rise time**. Low thermal resistance package reduces junction temperature, extends life.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C² 2900 Watts

Maximum Voltage and Current

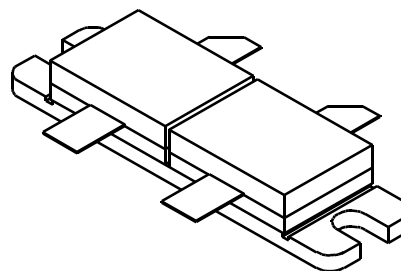
BVces Collector to Base Voltage 65 Volts
BVebo Emitter to Base Voltage 3.5 Volts
Ic Collector Current 80 Amps

Maximum Temperatures

Storage Temperature - 65 to + 200°C
Operating Junction Temperature + 200°C

CASE OUTLINE

**55KV, Style 1
Common Base**



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 1090 MHz	1000			Watts
P_{in}	Power Input	V _{cc} = 45 Volts			250	Watts
P_g	Power Gain	PW = 10 μsec	6.0			dB
η_c	Collector Efficiency	DF = 1%		43		%
t_r	Rise Time				70	ns
VSWR¹	Load Mismatch Tolerance	F = 1030 MHz			9:1	

B_{vebo}^{3,4}	Emitter to Base Breakdown	I _e = 50mA	3.5			Volts
B_{Vces}⁴	Collector to Emitter Breakdown	I _c = 100mA	65			Volts
h_{FE}⁴	DC - Current Gain	I _c = 1000mA, V _{ce} = 5 V	10			
θ_{jc}²	Thermal Resistance				0.06	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

3: Cannot measure due to input return

4: Per Side

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