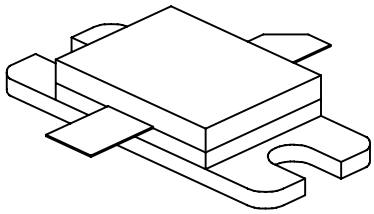
TPR 500A

500 Watts, 50 Volts, Pulsed
Avionics 1030 - 1090 MHz

GENERAL DESCRIPTION

The TPR 500A is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1030-1090 MHz. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. The transistor includes input prematch for broadband capaility. Low thermal resistance package reduces junction temperature, extends life.

CASE OUTLINE
55KT, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C[2] 1750 Watts

Maximum Voltage and Current

BVces	Collector to Base Voltage	55 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	40 Amps

Maximum Temperatures

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

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1090 MHz	500			Watts
Pin	Power Input	Vcc = 50 Volts			150	Watts
Pg	Power Gain	PW = 10 μsec	5.2			dB
η_c	Collector Efficiency	DF = 1%		35		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

BVebo	Emitter to Base Breakdown	Ie = 30 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 30 mA	55			Volts
h_{FE}	DC - Current Gain	Ic = 500 mA, Vce = 5 V	10			
θjc[2]	Thermal Resistance				0.1	°C/W

Note 1: At rated output power and pulse conditions
2: At rated pulse conditions

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