

TPR 175

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

GENERAL DESCRIPTION

The TPR 175 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 for proven highest MTTF. The transistor includes input prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C² 388 Watts

Maximum Voltage and Current

BVces Collector to Base Voltage 55 Volts

BVebo Emitter to Base Voltage 3.5 Volts

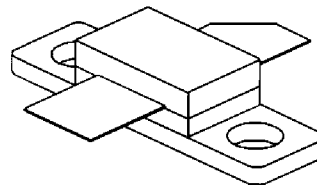
Ic Collector Current 12.5 Amps

Maximum Temperatures

Storage Temperature - 65 to + 150°C

Operating Junction Temperature + 200°C

CASE OUTLINE 55CX, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 1090 MHz	175			Watts
P _{in}	Power Input	V _{cc} = 50 Volts			25	Watts
P _g	Power Gain	PW = 10 μsec	8.0	9.0		dB
η _c	Collector Efficiency	DF = 1%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			00:1	

BVebo	Emitter to Base Breakdown	I _e = 5 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	I _c = 20 mA	55			Volts
h _{FE}	DC - Current Gain	I _c = 20 mA, V _{ce} = 5V	10			
θ _{jc} ²	Thermal Resistance				0.45	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

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