



# JTDA 50

50 Watts, 36 Volts, Pulsed  
Avionics 960 - 1215 MHz

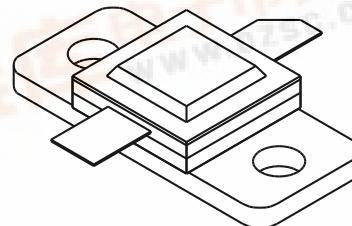
## GENERAL DESCRIPTION

The JTDA 50 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 960-1215 MHz. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. The transistor includes input and output prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

## ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C <sup>2</sup>	220 Watts
<b>Maximum Voltage and Current</b>	
BVces Collector to Base Voltage	55 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	7.0 Amps
<b>Maximum Temperatures</b>	
Storage Temperature	- 65 to + 200°C
Operating Junction Temperature	+ 200°C

## CASE OUTLINE 55AT, STYLE 1



SEE NOTE BELOW

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out	F = 960-1215 MHz	50			Watts
<b>Pin</b>	Power Input	Vcc = 36 Volts			10	Watts
<b>Pg</b>	Power Gain	PW = 10 $\mu$ sec	7.0			dB
$\eta_c$	Collector Efficiency	DF = 20%		40		%
<b>VSWR</b>	Load Mismatch Tolerance	F = 1090 MHz			10:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 25 mA	3.5			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 25 mA	55			Volts
<b>Cob</b>	Capacitance Collector to Base	Vcb = 36V				
<b>h<sub>FE</sub></b>	DC - Current Gain	Ic = 750 mA, Vce = 5 V	20		100	
$\theta_{jc}^2$	Thermal Resistance				0.8	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

Case Outline Note: During 1995 Ghz will be converting the 55AT style flange to the version using a slot in the mounting area, refer to 55AW.

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