GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

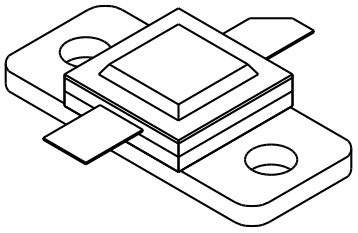
JTDA 50

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.

CASE OUTLINE
55AT, STYLE 1



SEE NOTE BELOW

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC[2]	220 Watts
Maximum Voltage and Current	
BVces Collector to Base Voltage	55 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	7.0 Amps
Maximum Temperatures	
Storage Temperature	- 65 to + 200ºC
Operating Junction Temperature	+ 200ºC

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 960-1215 MHz	50			Watts
Pin	Power Input	Vcc = 36 Volts			10	Watts
Pg	Power Gain	PW = 10 μsec	7.0			dB
η_c	Collector Efficiency	DF = 20%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

BVebo	Emitter to Base Breakdown	Ie = 25 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 25 mA	55			Volts
Cob	Capacitance Collector to Base	Vcb = 36V				
$\mathbf{h_{FE}}$	DC - Current Gain	Ic = 750 mA, Vce = 5 V	20		100	
$\theta\mathbf{jc}^2$	Thermal Resistance				0.8	ºC/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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