GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

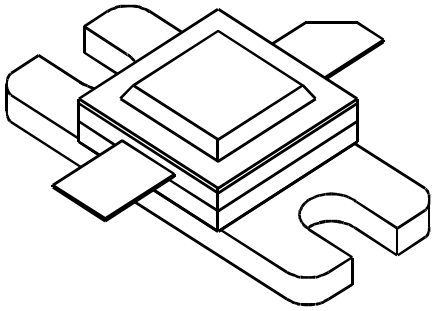
JTDB 25

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

GENERAL DESCRIPTION

The JTDB 25 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
55AW, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C[2]	97 Watts
Maximum Voltage and Current	
BVces Collector to Base Voltage	55 Volts
BVebo Emitter to Base Voltage	3.5 Volts
Ic Collector Current	5.0 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 = 960-1215 MHz	25			Watts
Pin	Power Input	Vcc = 36 Volts			5.0	Watts
Pg	Power Gain	PW = 10 μsec	7.0	7.5		dB
η_c	Collector Efficiency	DF = 40%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			5:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	Ic = 10 mA	55			Volts
$\mathbf{h_{FE}}$	DC - Current Gain	Ic = 500 mA,Vce = 5 V	10			
θ**jc**[2]	Thermal Resistance				1.8	°C/W

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

Issue A, July 1997

GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

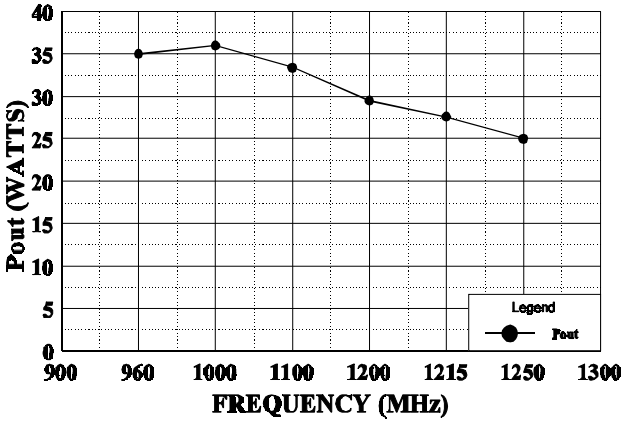
GHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

JTDB25

All Data shown is for operation under the rated pulse conditions.

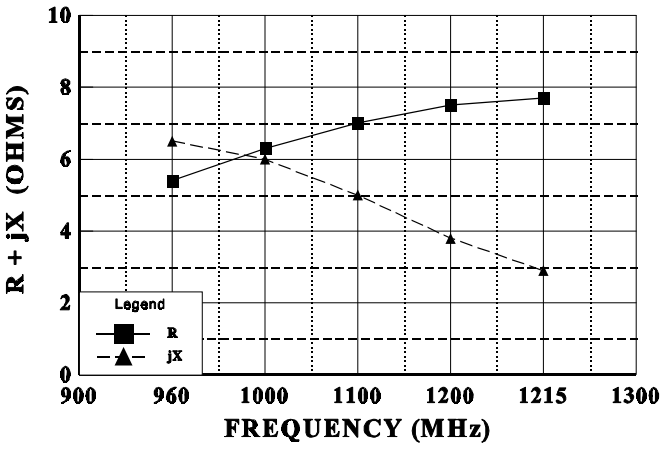
POWER OUTPUT vs FREQUENCY

Vcc = 36 V, Pin = 5 W



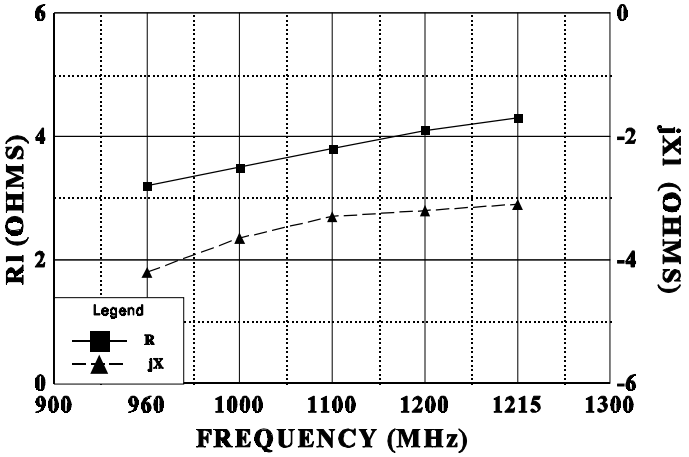
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 36 V, Pin = 5 W



SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc = 36 V, Pin = 5 W



July 1997

GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120