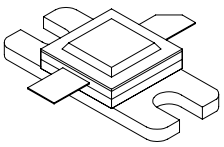
JTDB25

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

GENERAL DESCRIPTION

The JTDB25 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-1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC[1]	97W
Maximum Voltage and Current	
BV_{CES}	55V
BV_{EBO}	3.5V
I_C	5.0A
Maximum Temperatures	
Storage Temperature	-65 to +200ºC
Operating Junction Temperature	+200ºC

ELECTRICAL CHARACTERISTICS @ 25°C

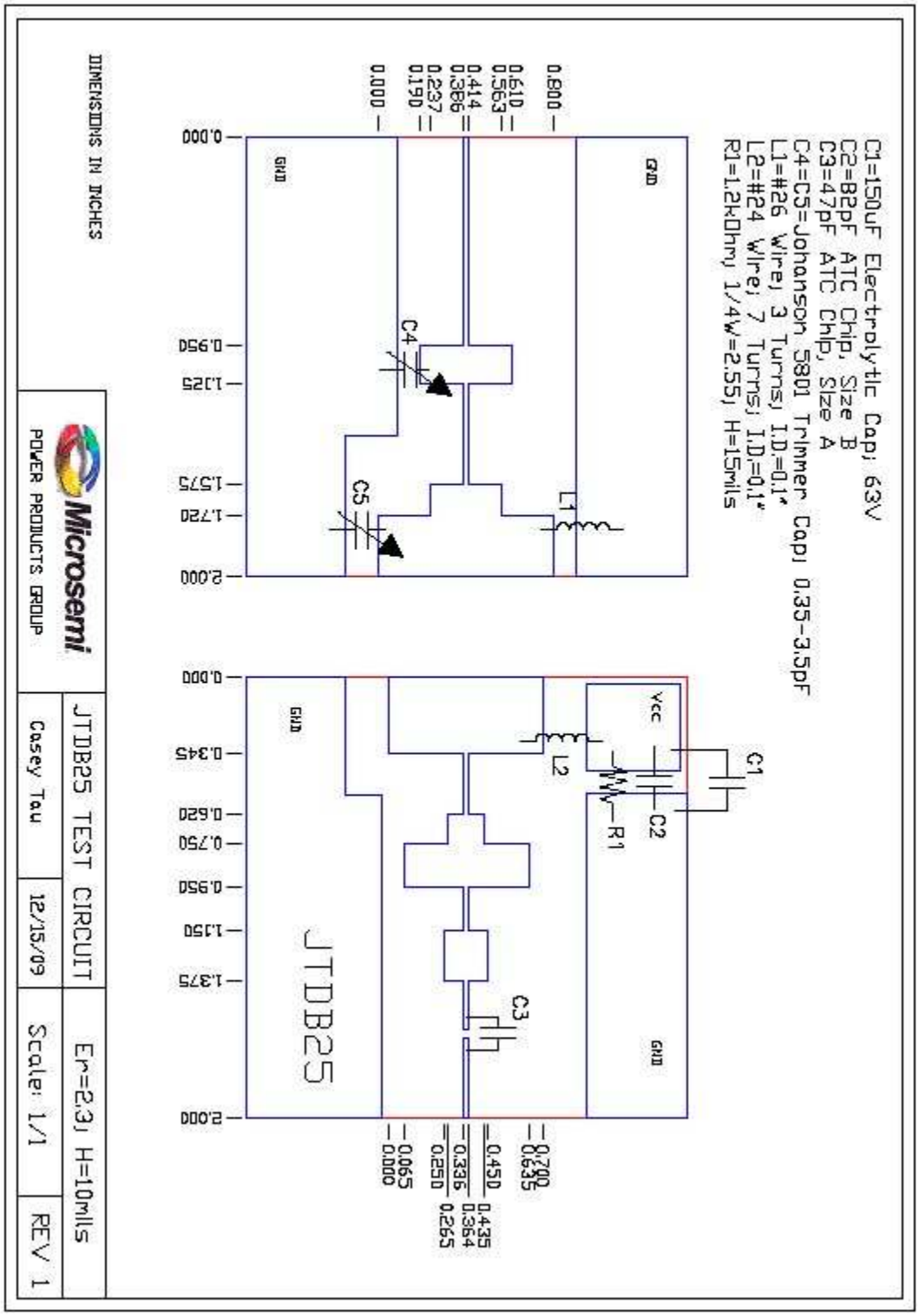
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BV_{EBO}	Emitter – Base Breakdown	I_E = 5 mA	3.5			V
BV_{CES}	Collector – Emitter Breakdown	I_C = 10 mA	55			V
h_{FE}	DC – Current Gain	I_C = 500mA, V_{CE} = 5V	20			
θ_{JC}[1]	Thermal Resistance				1.8	ºC/W

FUNCTIONAL CHARACTERISTICS @ 25°C

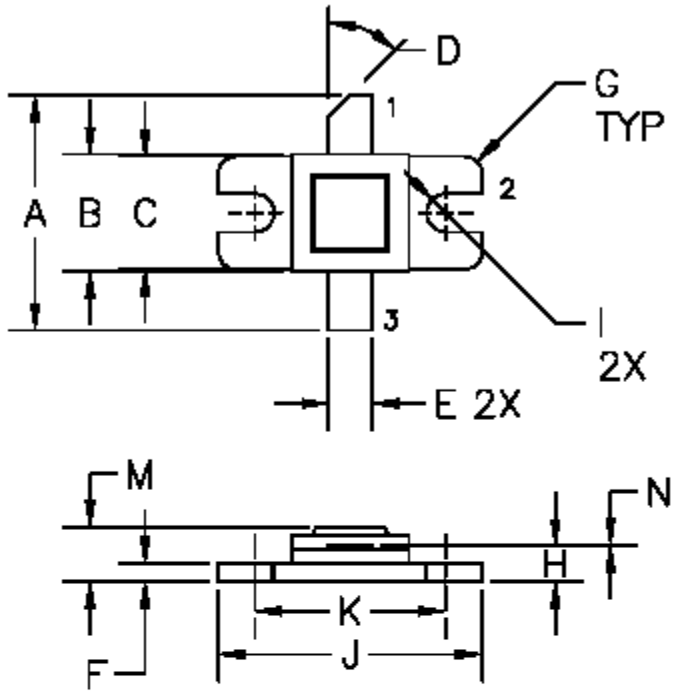
Pout	Power Output	F=960-1215 MHz	25			W
Pin	Power Input	Vcc = 36V			5	W
Gain	Power Gain	Pulse width = 10µs	7.0	7.5		
RL	Return Loss	DF=40%	8			dB
VSWR[2]	Load Mismatch Tolerance	F = 1090 MHz			5:1	

NOTES: 1. At Rated Pulse Conditions
2. At Rated Output Power

Rev A: Dec 2009



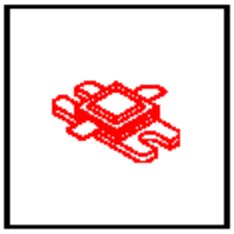
ZONE	REV	DESCRIPTION	DATE	APPROVED



DIM	MILLIMETER	±TOL	INCHES	±TOL
A	20.32	.76	.800	.050
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45°	5°	45°	5°
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52R	.13	.060R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	4.70	REF	.185	REF
N	0.13	.02	.005	.001

STYLE 1:
PIN1 = COLLECTOR
2 = BASE
3 = EMITTER

STYLE 2:
PIN1 = COLLECTOR
2 = EMITTER
3 = BASE



Microsemi

CAGE	DWG NO.	REV
OPJR2	55AW	A
SCALE 2/1	SHEET	