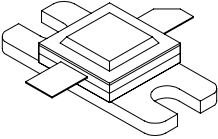




# JTDB25

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

<p><b>GENERAL DESCRIPTION</b></p> <p>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.</p>	<p><b>CASE OUTLINE</b> <b>55AW-1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C<sup>1</sup> 97W</p> <p><b>Maximum Voltage and Current</b></p> <p>BV<sub>CES</sub> 55V</p> <p>BV<sub>EBO</sub> 3.5V</p> <p>I<sub>C</sub> 5.0A</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature -65 to +200°C</p> <p>Operating Junction Temperature +200°C</p>	

**ELECTRICAL CHARACTERISTICS @ 25°C**

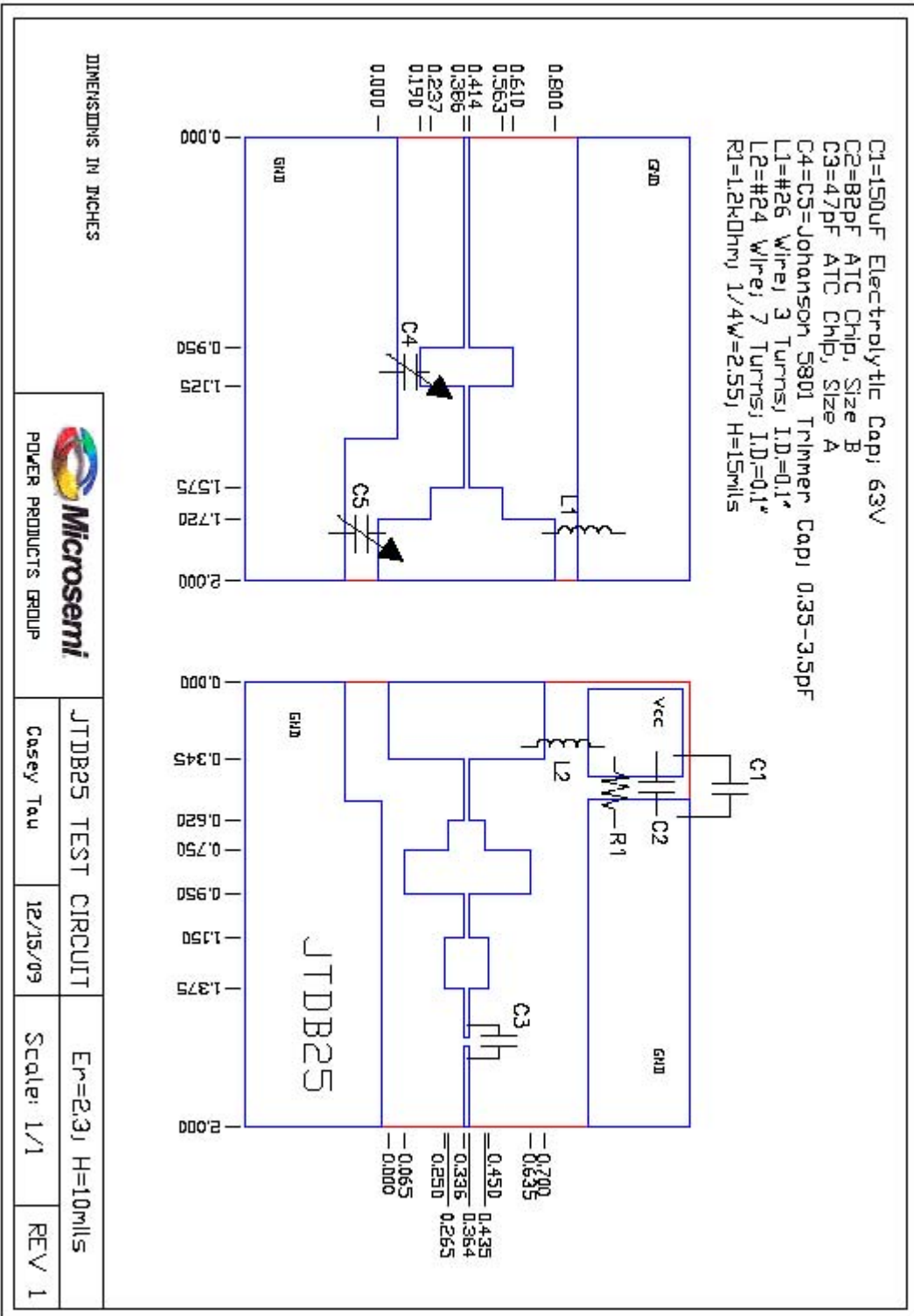
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BV <sub>EBO</sub>	Emitter – Base Breakdown	I <sub>E</sub> = 5 mA	3.5			V
BV <sub>CES</sub>	Collector – Emitter Breakdown	I <sub>C</sub> = 10 mA	55			V
h <sub>FE</sub>	DC – Current Gain	I <sub>C</sub> = 500mA, V <sub>CE</sub> = 5V	20			
θ <sub>JC</sub> <sup>1</sup>	Thermal Resistance				1.8	°C/W

**FUNCTIONAL CHARACTERISTICS @ 25°C**

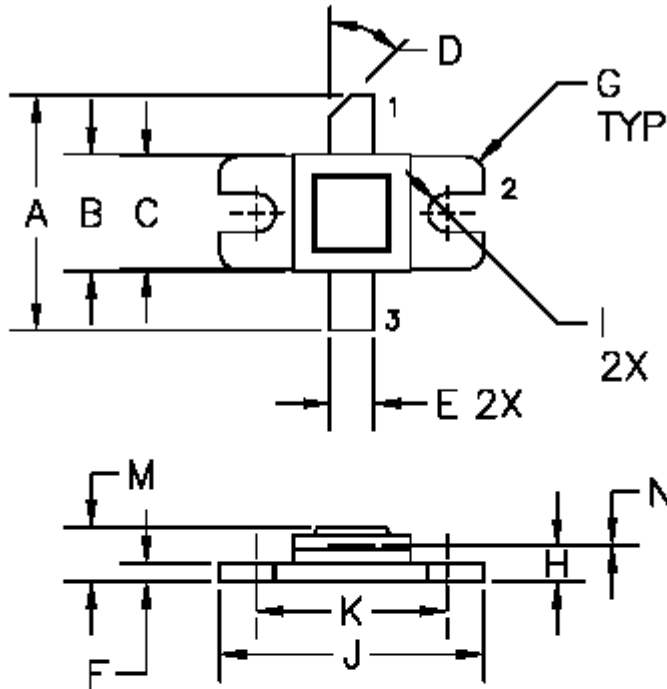
Pout	Power Output	F=960-1215 MHz	25			W
Pin	Power Input	V <sub>cc</sub> = 36V			5	W
Gain	Power Gain	Pulse width = 10µs	7.0	7.5		
RL	Return Loss	DF=40%	8			dB
VSWR <sup>2</sup>	Load Mismatch Tolerance	F = 1090 MHz			5:1	

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

Rev A: Dec 2009



REVISIONS				
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	.080	.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**



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