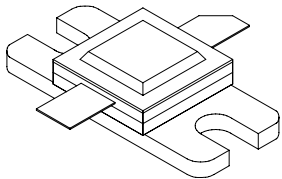




JTDB75

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

<p>GENERAL DESCRIPTION</p> <p>The JTDB75 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 MTF. The transistor includes input and output prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.</p>	<p>CASE OUTLINE 55AW, Style 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation Device Dissipation @25°C² 220 W</p> <p>Maximum Voltage and Current Collector to Base Voltage (BV_{ces}) 55 V Emitter to Base Voltage (BV_{ebo}) 3.5 V Collector Current (I_c) 8.0 A</p> <p>Maximum Temperatures Storage Temperature -65 to +200 °C Operating Junction Temperature +200 °C</p>	

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 960-1215 MHz	75			W
P _{in}	Power Input	V _{cc} = 36 Volts			15	W
P _g	Power Gain	PW = 10 μsec, Note 1	7.0	8.2		dB
η _c	Collector Efficiency	DF = 40%, Note 1		40		%
VSWR ¹	Load Mismatch Tolerance	F = 1090 MHz			3:1	

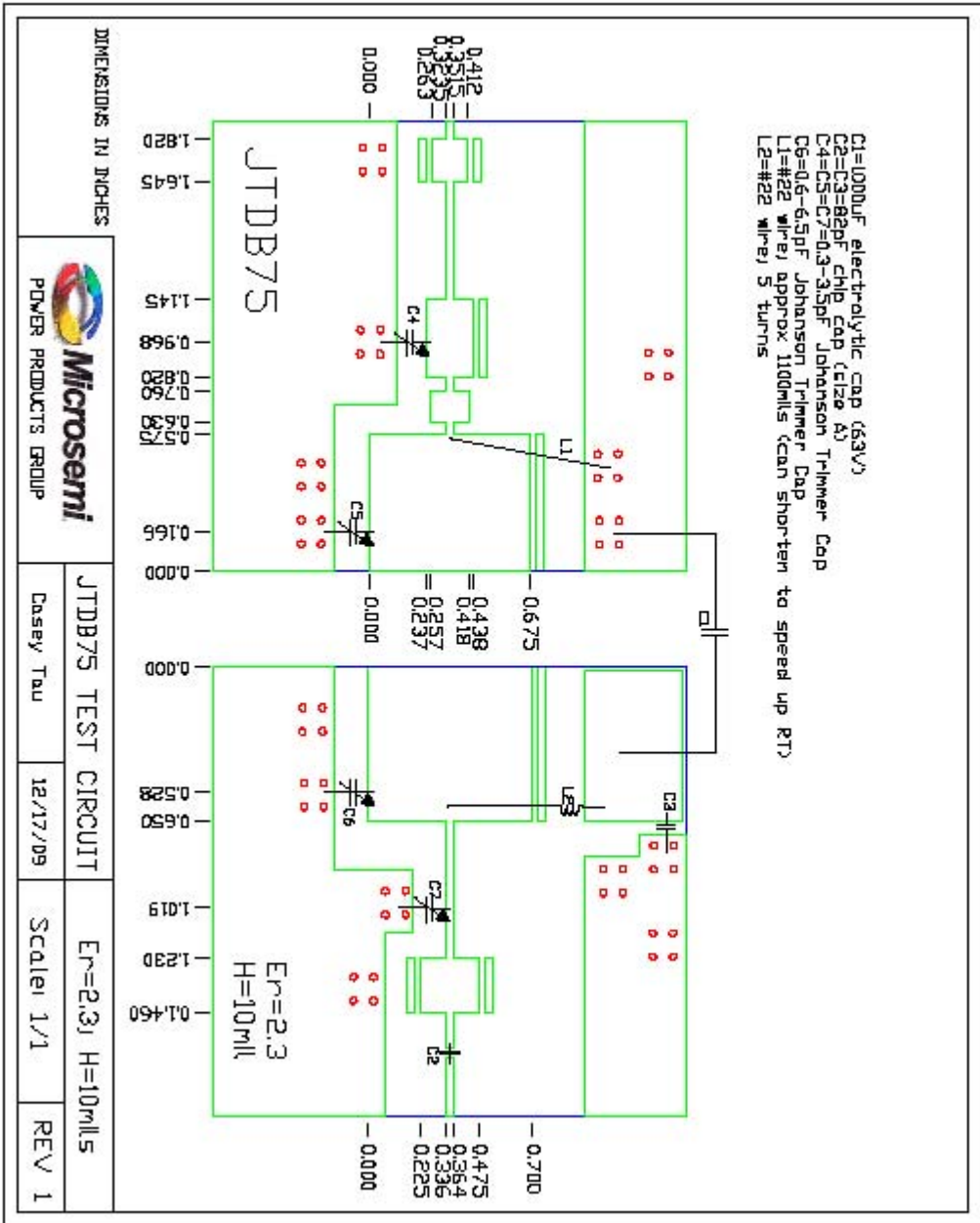
FUNCTIONAL CHARACTERISTICS @ 25°C

BV _{ebo}	Emitter to Base Breakdown	I _e = 30 mA	3.5			V
BV _{ces}	Collector to Emitter Breakdown	I _c = 30 mA	55			V
h _{FE}	DC – Current Gain	V _{ce} = 5V, I _c = 1A	20		100	
θ _{jc} ²	Thermal Resistance				0.8	°C/W

NOTE 1: At rated output power and pulse conditions

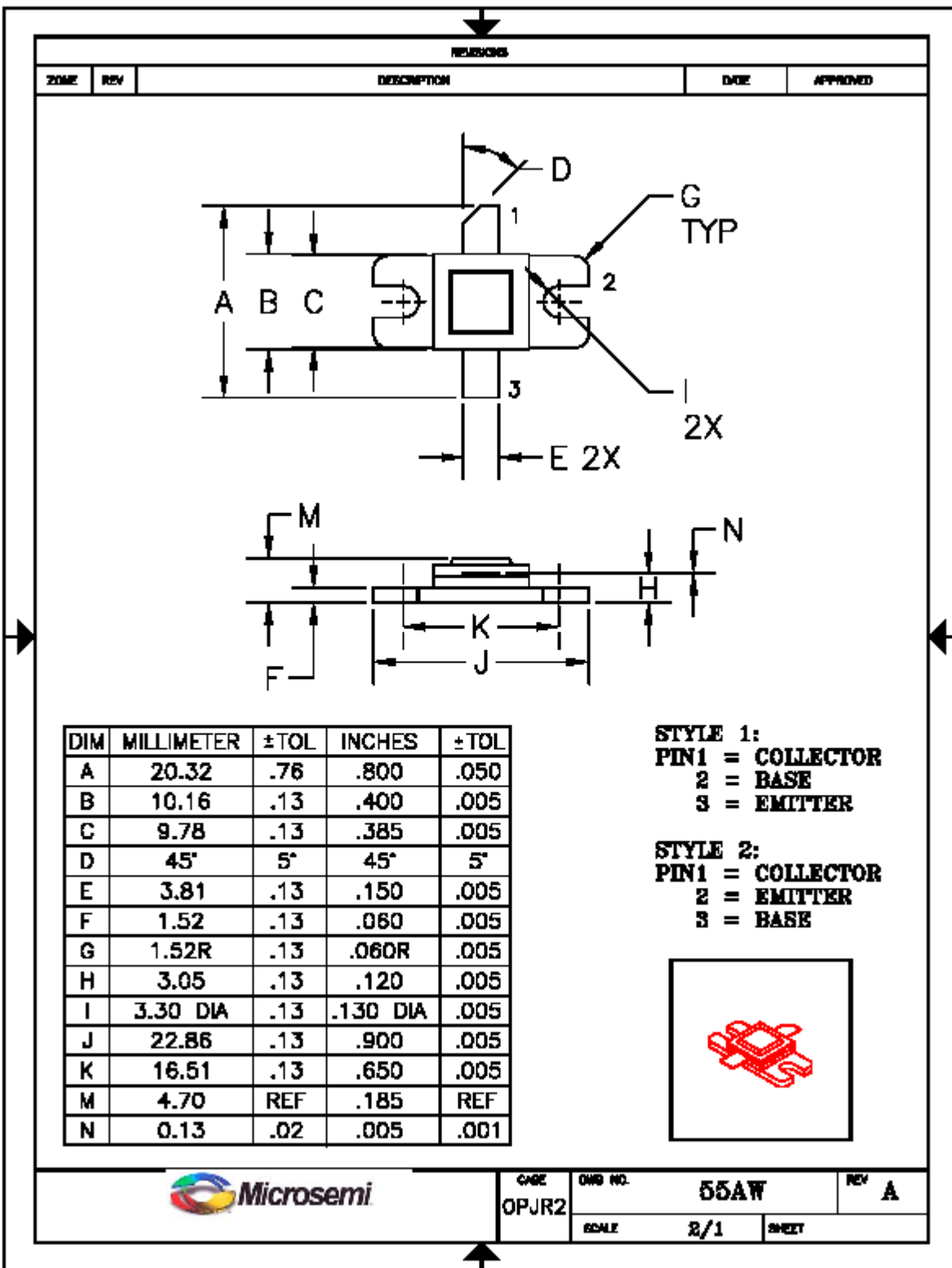
2. At rated pulse conditions

Rev A: Dec 2009



MICROSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. MICROSEMI RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

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



CAGE
OPJR2

DWG NO.

55AW

REV
A

SCALE

2/1

SHEET

MICROSEMI RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. MICROSEMI RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

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