

GENERAL DESCRIPTION

The JTDA50 is a common basis transistor providing 50 watts of pulsed RF output power across the 960-1215 MHz Band. This hermetically sealed transistor is specifically designed for JTIDS and other similar high power, long pulse width, high duty cycle applications. It utilizes gold metallization and emitter ballasting to provide ruggedness and high reliability along with internal matching for ease of design.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25 °C Case Temperature 220 W

Maximum Voltage and Current

BVces Collector to Emitter Voltage 55 V

BVebo Emitter to Base Voltage 3.5 V

Ic Collector Current 7.0 A

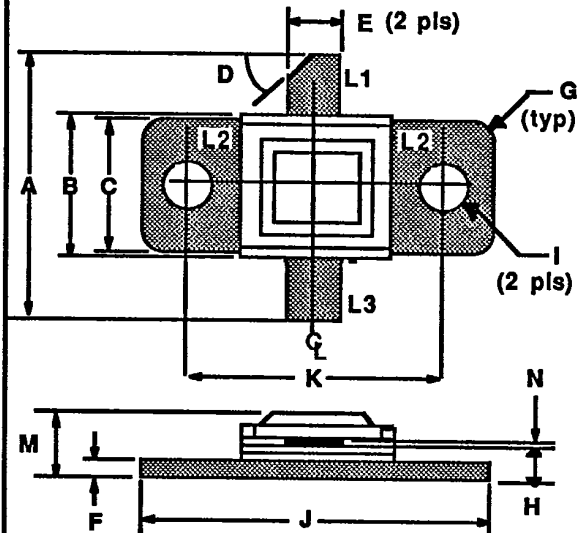
Maximum Temperatures

Storage Temperature -65 to +200 °C

Operating Junction Temperature +200 °C

JTDA50
50 WATTS - 36 VOLTS
960-1215 MHz

AVIONICS

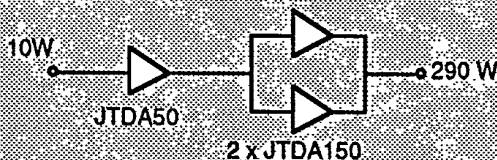


DIM	Millimeter	TOL	Inches	TOL
A	20.32	.76	.800	.030
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45 °	5 °	45 °	5 °
E	3.81	.13	.150	.005
F	1.52	.13	.060	.005
G	1.52 R	.13	.060 R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	5.46	REF	.215	REF
N	0.13	.02	.005	.001

TYPICAL AMPLIFIER LINE UP

Vcc= 36 Volts

Frequency Range= 900-1215 MHz



JTDA50-2**ELECTRICAL CHARACTERISTICS¹**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P_{out}^2	Power Output	$f=960-1215$ MHz $V_{cc}=25$ mA	50			Watts
P_{in}^2	Power Input				10	Watts
P_g^2	Power Gain		7.0			dB
η_c	Collector Efficiency			40		%
V_{SWR}^2	Load Mismatch Tolerance	$f=960$ MHz			10:1	
B_{Vebo}	Breakdown Voltage (Emitter to Base)	$I_c=0A, I_e=25mA$	3.5			Volts
B_{Vces}	Breakdown Voltage (Collector to Emitter)	$V_{be}=0A, I_c=25mA$	55			Volts
h_{FE}	DC-Current Gain	$I_c=750$ mA, $V_{ce}=5V$	20		100	
θ_{jc}	Thermal Resistance				0.8	C/W

Note 1: $T_c = +25^\circ C$ unless otherwise specifiedNote 2: Pulse Width = 10 μsec ; Duty Cycle = 20%; $V_{cc}=36$ Volts

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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