



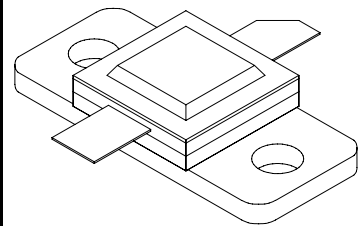
# TAN150

150 Watts, 50 Volts, Pulsed  
Avionics 960 - 1215 MHz

## GENERAL DESCRIPTION

The TAN150 is a high powered 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 55AT, Style 1



## ABSOLUTE MAXIMUM RATINGS

### Maximum Power Dissipation

Device Dissipation @25°C 583 W

### Maximum Voltage and Current

Collector to Base Voltage ( $BV_{ces}$ ) 55 V

Emitter to Base Voltage ( $BV_{ebo}$ ) 3.5 V

Collector Current ( $I_c$ ) 15.0 A

### Maximum Temperatures

Storage Temperature -65 to +150 °C

Operating Junction Temperature +200 °C

## ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$P_{out}$	Power Out	F = 960-1215 MHz	150			W
$P_{in}$	Power Input	$V_{cc} = 50$ Volts			30	W
$P_g$	Power Gain	PW = 20 $\mu$ sec	7.0			dB
$\eta_c$	Collector Efficiency	DF = 5%		38		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			10:1	

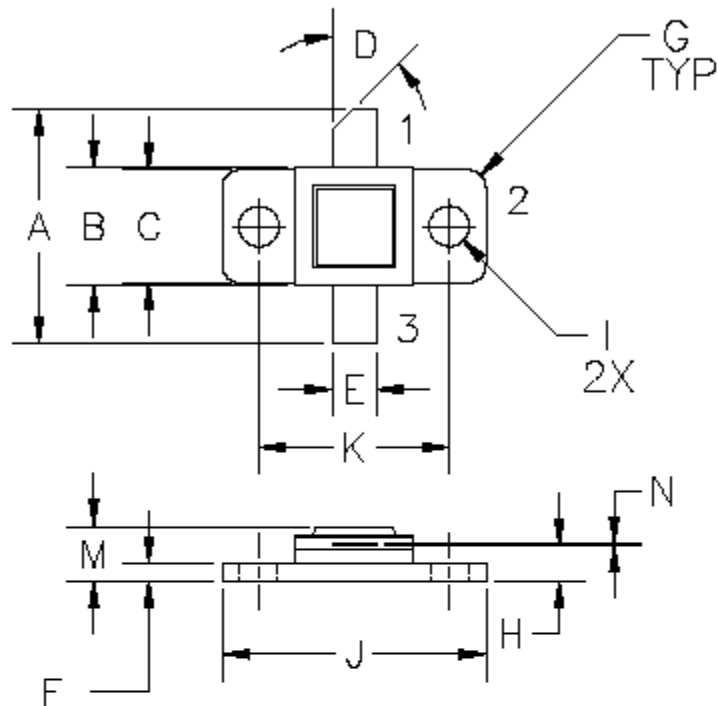
## FUNCTIONAL CHARACTERISTICS @ 25°C

$BV_{ebo}$	Emitter to Base Breakdown	$I_e = 10$ mA	3.5			V
$BV_{ces}$	Collector to Emitter Breakdown	$I_c = 50$ mA	55			V
$h_{FE}$	DC – Current Gain	$V_{ce} = 5V, I_c = 1$ A	10			
$\theta_{jc}^1$	Thermal Resistance				0.3	°C/W

NOTE 1: At rated output power and pulse conditions

Rev A: Updated June 2009

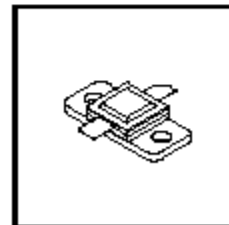
TAN150 CASE DRAWING:



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	1.47	.25	.058	.010
G	1.52R	.13	.060R	.005
H	3.05	.25	.120	.010
I	3.25 DIA	.13	.128 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	4.70	REF	.185	REF
N	0.10	.02	.004	.001

**STYLE 1:**  
 PIN 1 = COLLECTOR  
 2 = BASE  
 3 = EMITTER

**STYLE 2:**  
 PIN 1 = COLLECTOR  
 2 = EMITTER  
 3 = BASE



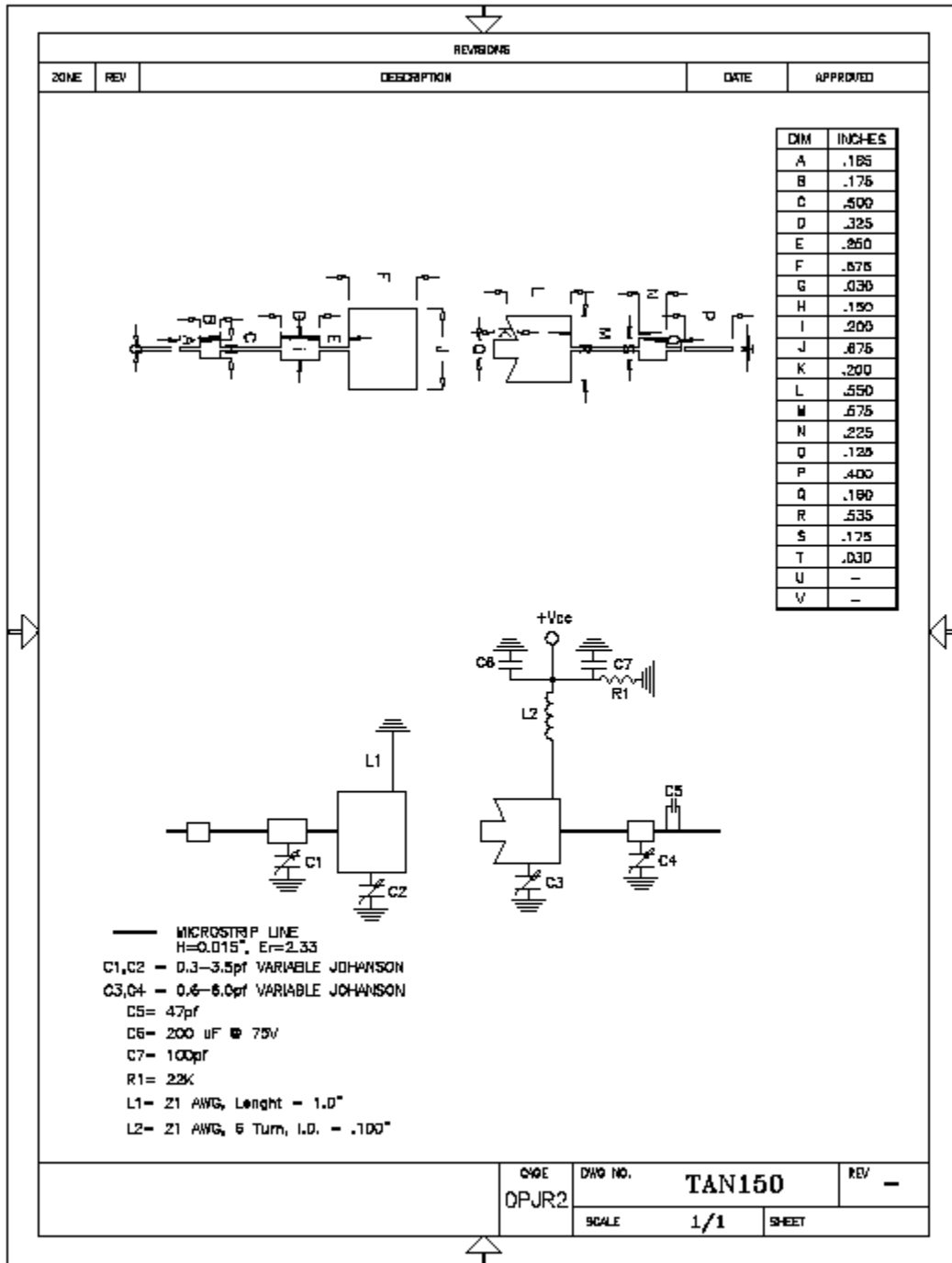
DWG NO.

55AT

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

# TAN150 TEST CIRCUIT:



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