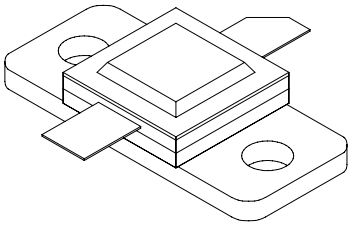
TAN150

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	Vcc = 50 Volts			30	W
P_g	Power Gain	PW = 20 μsec	7.0			dB
η_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	Ie = 10 mA	3.5			V
BV_{ces}	Collector to Emitter Breakdown	Ic = 50 mA	55			V
h_{FE}	DC – Current Gain	Vce = 5V, Ic = 1 A	10			
θjc^1	Thermal Resistance				0.3	°C/W

NOTE 1: At rated output power and pulse conditions

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Rev A: Updated June 2009

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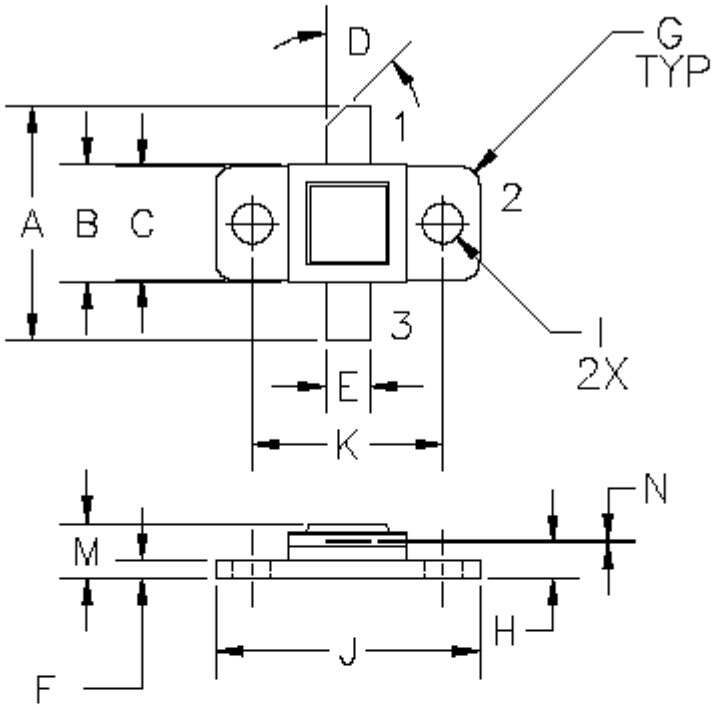
TAN150 CASE DRAWING:



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

Microsemi

DWG NO.

55AT

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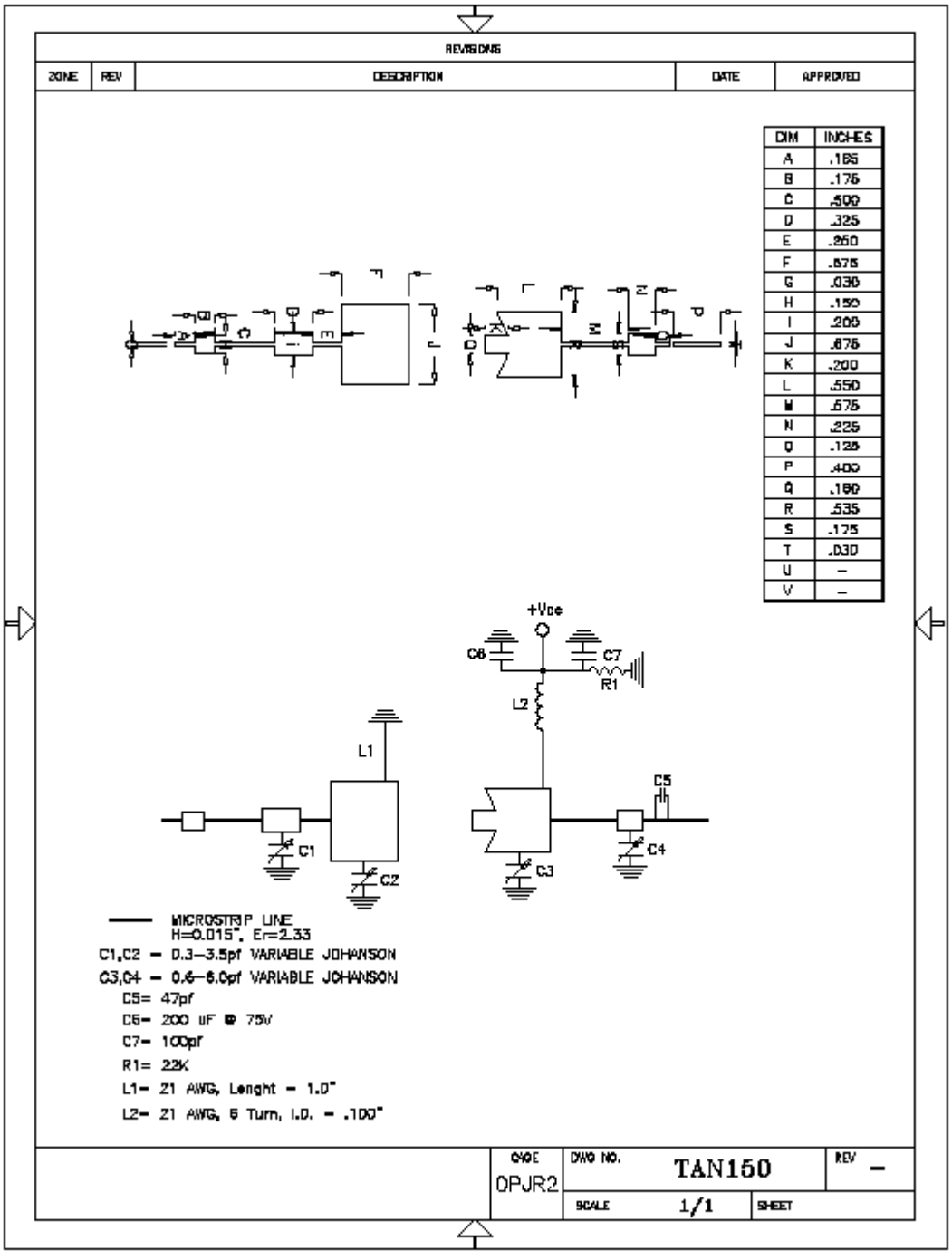
TAN150 TEST CIRCUIT:



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