

# **DME 150**

150 Watts, 50 Volts, Pulsed Avionics 1025 - 1150 MHz

## **GENERAL DESCRIPTION**

The DME 150 is a high power COMMON BASE bipolar transistor. It is designed for pulsed systems in the frequency band 1025-1150 MHz. The device has gold thin-film metallization and diffused ballasting for proven highest MTTF. The transistor includes input and ouput prematch for broadband capabilit. Low thermal resistance package reduces junction temperature, extends life.

## ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C<sup>2</sup> 290 Watts

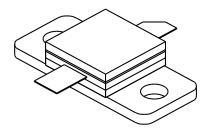
**Maximum Voltage and Current** 

BVcesCollector to Base Voltage55 VoltsBVeboEmitter to Base Voltage4.0 VoltsIcCollector Current15 Amps

**Maximum Temperatures** 

Storage Temperature  $-65 \text{ to} + 150^{\circ}\text{C}$ Operating Junction Temperature  $+150^{\circ}\text{C}$ 

# CASE OUTLINE 55AY, STYLE 1



## **ELECTRICAL CHARACTERISTICS** @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout Pin Pg η <sub>c</sub> VSWR	Power Out Power Input Power Gain Collector Efficiency Load Mismatch Tolerance	F = 1025-1150  MHz $Vcc = 50  Volts$ $PW = 10  µsec$ $DF = 1%$ $F = 1090  MHz$	150 7.8	8.3 40	25 20:1	Watts Watts dB %

BVebo BVces	Emitter to Base Breakdown Collector to Emitter Breakdown	Ie = 15 mA Ic = 25 mA	4.0 55		Volts Volts
$egin{aligned} \mathbf{Cob} \ \mathbf{h}_{\mathbf{FE}} \ \mathbf{ heta jc}^2 \end{aligned}$	Capacitance Collector to Base DC - Current Gain Thermal Resistance	Vcb = 50  Volts $Ic = 250  mA, Vce = 5  V$	20	0.6	pF °C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

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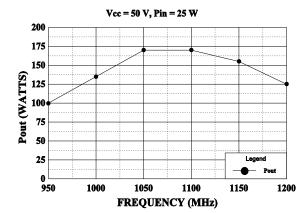
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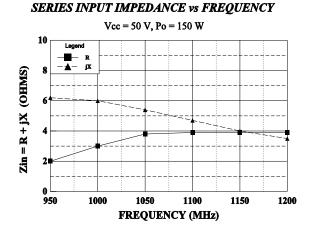
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## **DME150**

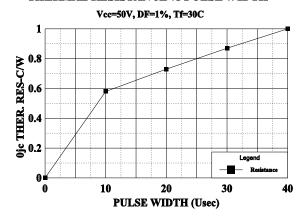


## **POWER OUTPUT**

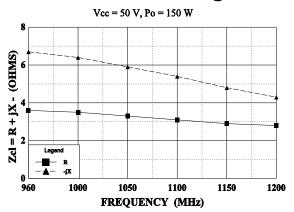




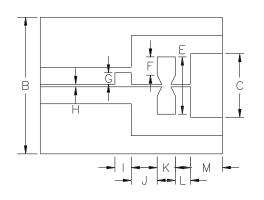
#### THERMAL RESISTANCE vs PULSE WIDTH

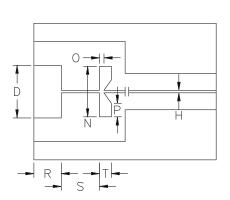


#### SERIES LOAD IMPEDANCE vs FREQUENCY



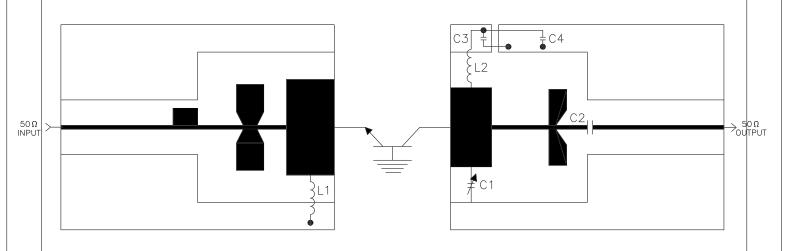






DIM	INCHES		
Α	2.000		
В	1.500		
С	.700		
D	.550		
E	.628		
F	.200		
G	.140		
Н	.028		
I	.180		
J	.284		
K	.200		
L	.166		
М	.350		
N	.528		
0	.050		
Р	.150		
Q	.028		
R	.300		
S	.419		
Т	.130		

## 1025/1150 MHz TEST AMPLIFIER



Material=.010" Duroid Er=2.3

L1= 1" No. 20 wire

L2= 7 turns No. 20 wire, closewound 1/8" dia.

C1= Johanson No. 5701, 6-6PF

C2= A.T.C. Chip cap. 82PF

C3= A.T.C. Chip cap. 92PF

C4= 200 MFD @ 50V



CAGE	DWG NO.	DME	150		REV A
OPJR2		קוואועו	100		
	SCALE	1/1		SHEET	