



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 output prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C² 290 Watts

Maximum Voltage and Current

BVces Collector to Base Voltage 55 Volts

BVebo Emitter to Base Voltage 4.0 Volts

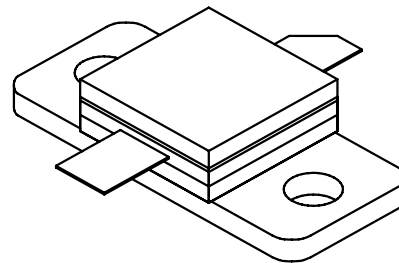
Ic Collector Current 15 Amps

Maximum Temperatures

Storage Temperature - 65 to + 150°C

Operating Junction Temperature + 150°C

CASE OUTLINE 55AY, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 1025-1150 MHz	150			Watts
P _{in}	Power Input	V _{cc} = 50 Volts			25	Watts
P _g	Power Gain	PW = 10 μsec	7.8	8.3		dB
η _c	Collector Efficiency	DF = 1%		40		%
V _{SWR}	Load Mismatch Tolerance	F = 1025 MHz			20:1	

BVebo	Emitter to Base Breakdown	I _e = 15 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	I _c = 25 mA	55			Volts
h _{FE}	DC - Current Gain	I _c = 250 mA, V _{ce} = 5 V	20		100	
θ _{jc} ²	Thermal Resistance				0.6	°C/W

Note 1: At rated output power and pulse conditions

2: At rated pulse conditions

Rev A January 2009

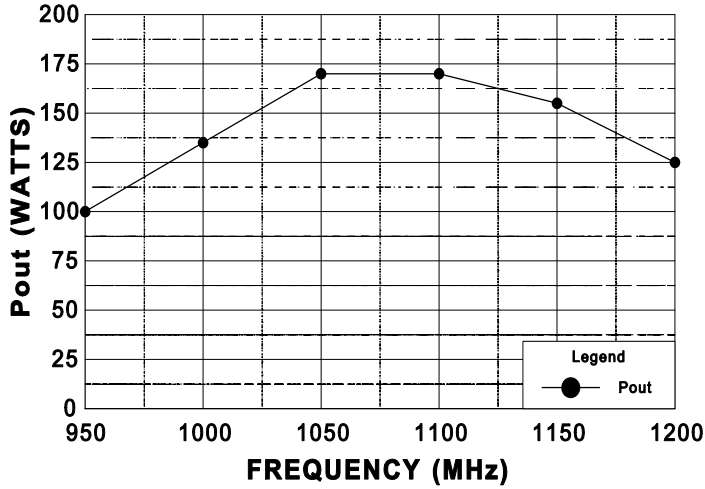
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DME150

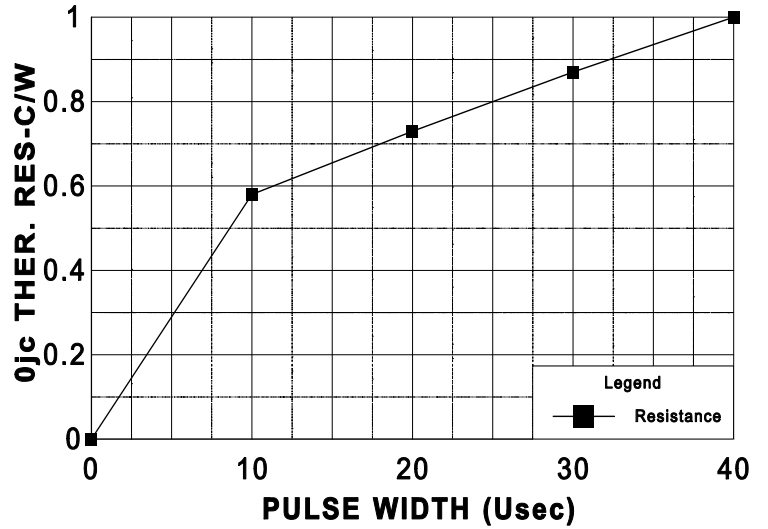
POWER OUTPUT

Vcc = 50 V, Pin = 25 W



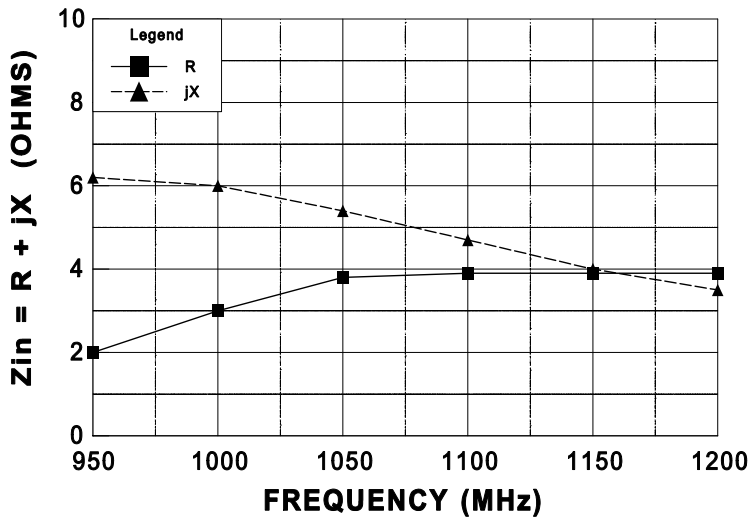
THERMAL RESISTANCE vs PULSE WIDTH

Vcc=50V, DF=1%, Tf=30C



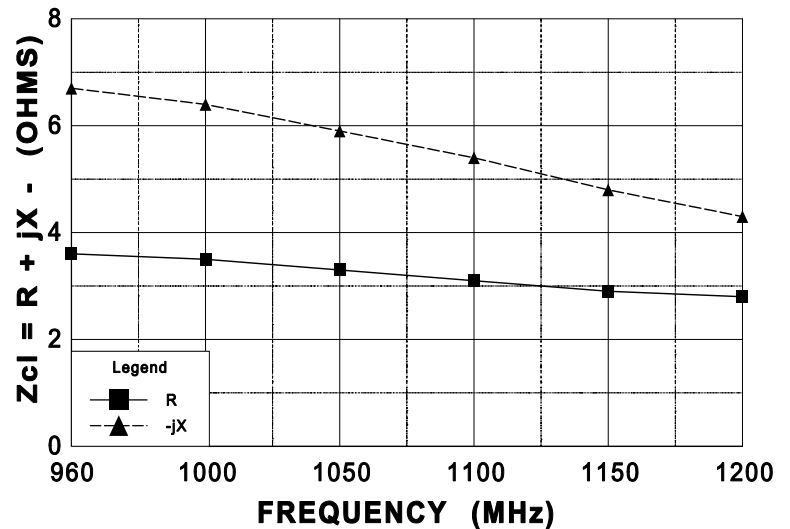
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 50 V, Po = 150 W



SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc = 50 V, Po = 150 W



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