



DME375A

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

www.datasheet4u.com

GENERAL DESCRIPTION

The DME375A 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 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

Device Dissipation @25°C² 875 W

Maximum Voltage and Current

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

Emitter to Base Voltage (BV_{ebo}) 4.0 V

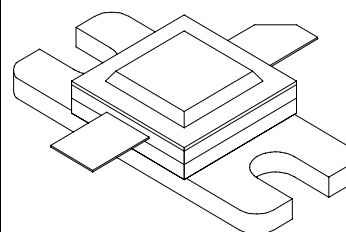
Collector Current (I_c) 30 A

Maximum Temperatures

Storage Temperature -65 to +200 °C

Operating Junction Temperature +200 °C

CASE OUTLINE 55AW Style 1



ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 1025 – 1150 MHz	375			W
P _{in}	Power Input	V _{cc} = 50 Volts			85	W
P _g	Power Gain	PW = 10 μsec	6.5			dB
η _c	Collector Efficiency	DF = 1%		40		%
VSWR ¹	Load Mismatch Tolerance	F = 1090 MHz			□:1	

FUNCTIONAL CHARACTERISTICS @ 25°C

BV _{ebo}	Emitter to Base Breakdown	I _e = 20 mA	4.0			V
BV _{ces}	Collector to Emitter Breakdown	I _c = 25 mA	55			V
h _{FE}	DC – Current Gain	V _{ce} = 5V, I _c = 300 mA	10			
θ _{jc} ²	Thermal Resistance				0.2	°C/W

NOTE 1: At rated output power and pulse conditions

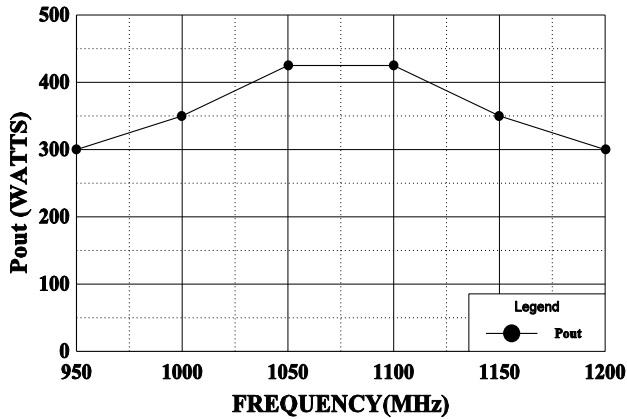
2. At rated pulse conditions

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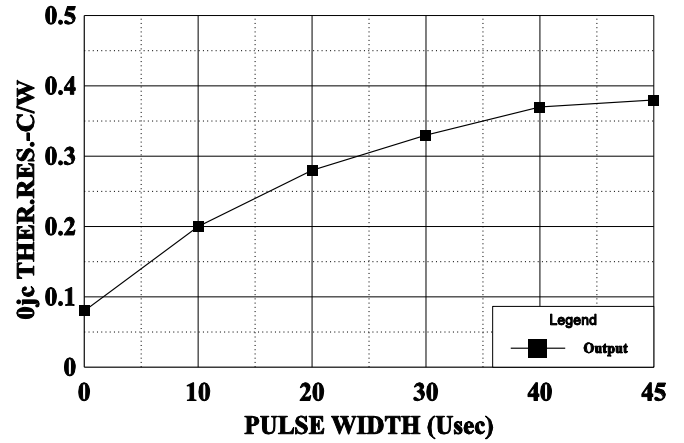
POWER OUTPUT

$V_{cc} = 50\text{ V}$, $P_{in} = 85\text{ W}$



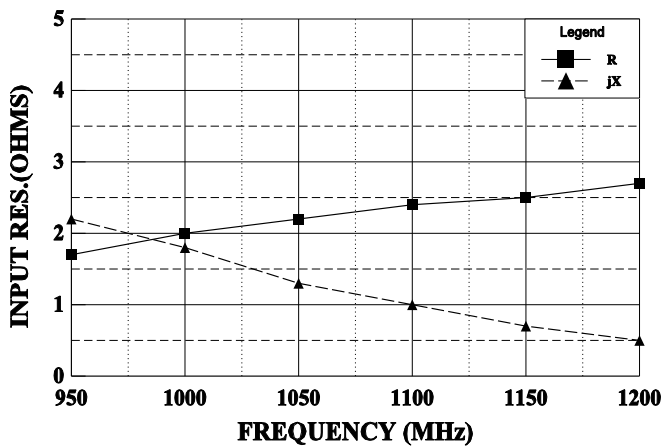
THERMAL RESISTANCE vs PULSE WIDTH

$V_{cc} = 50\text{ V}$, $T_f = 30\text{ C}$



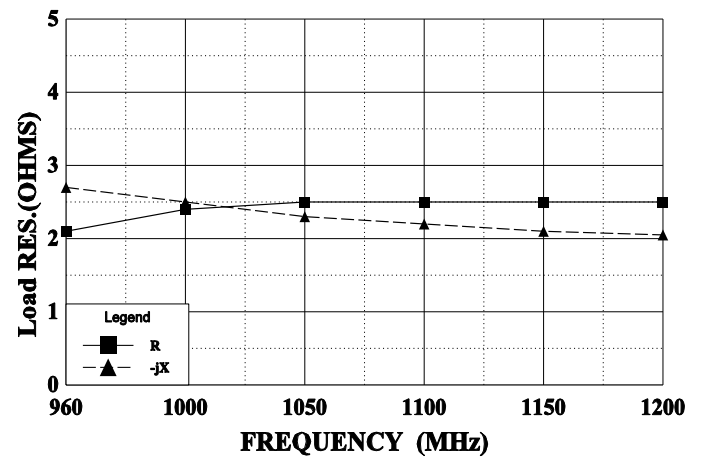
SERIES INPUT IMPEDANCE vs FREQUENCY

$V_{cc} = 50\text{ V}$, $P_o = 375\text{ W}$



SERIES LOAD IMPEDANCE vs FREQUENCY

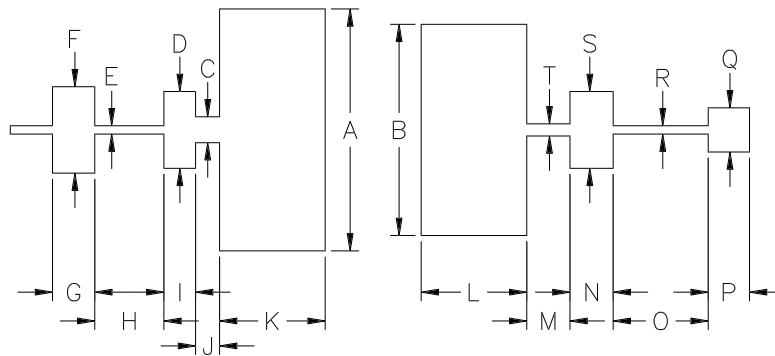
$V_{cc} = 50\text{ V}$, $P_o = 375\text{ W}$



REVISIONS

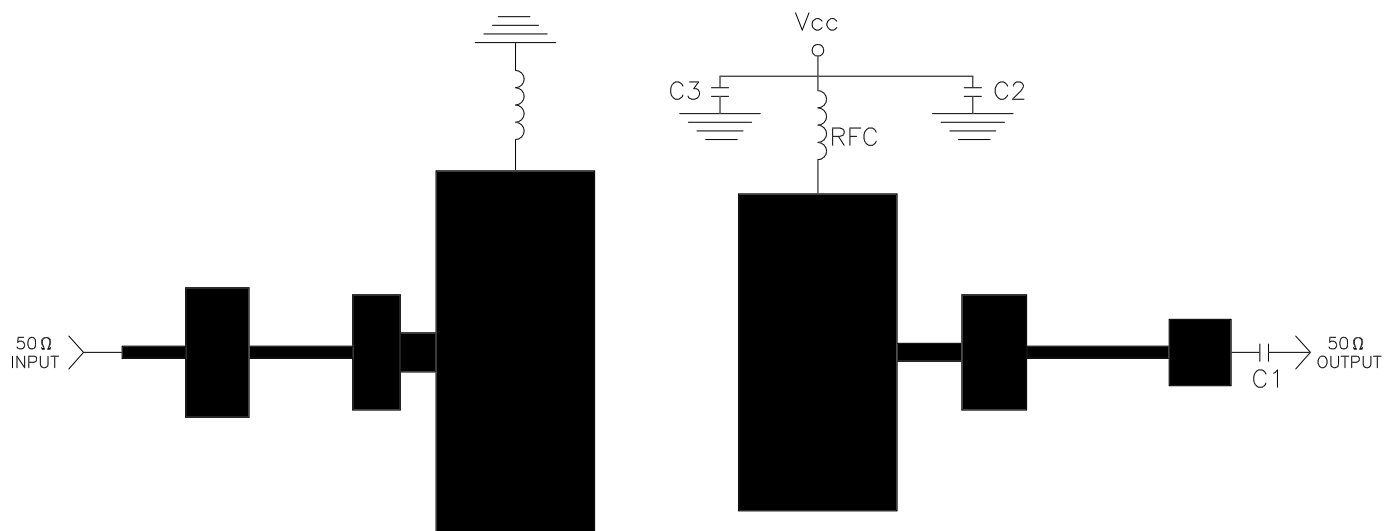
ZONE	REV	DESCRIPTION	DATE	APPROVED
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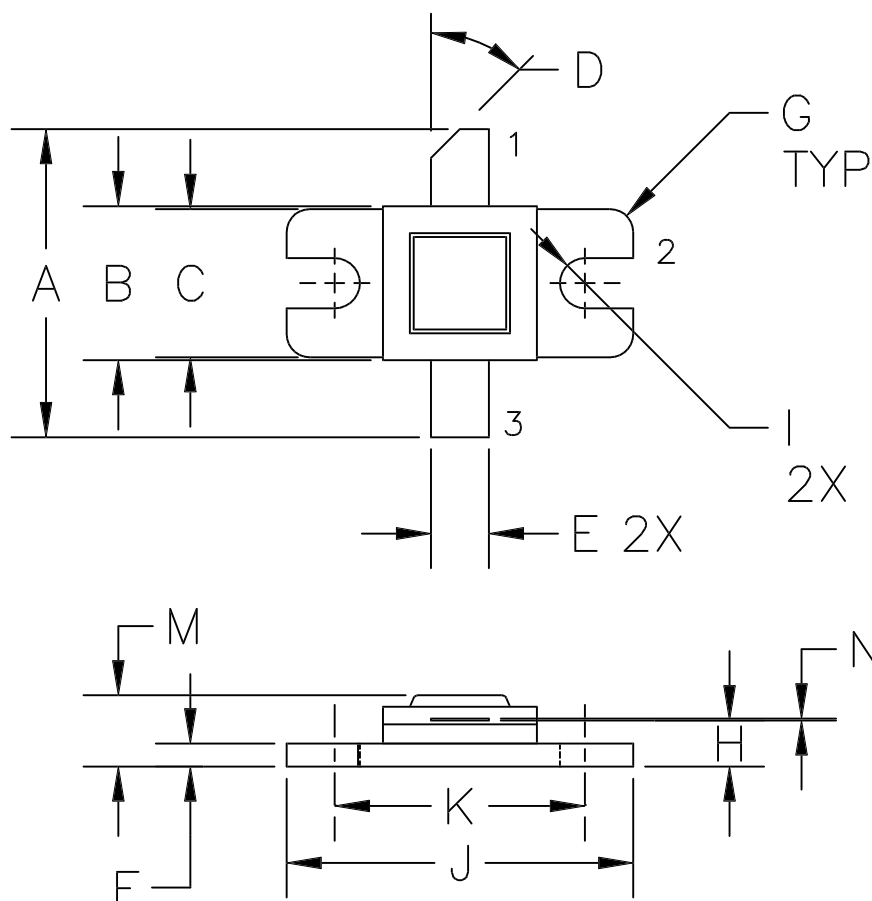


DIM	INCHES
A	1.260
B	1.100
C	.135
D	.400
E	.042
F	.450
G	.220
H	.360
I	.165
J	.125
K	.550
L	.550
M	.225
N	.225
O	.495
P	.215
Q	.230
R	.042
S	.400
T	.062

1025/1150 MHz TEST AMPLIFIER (FIG. 1)



PCB= .020" TFE, 2 oz. CU. Type "GT"
C1, C2= 82pf Chip
C3= 250 MFD



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	1.52	.13	.060	.005
G	1.52R	.13	.060R	.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	4.70	REF	.185	REF
N	0.13	.02	.005	.001

STYLE 1:
 PIN1 = COLLECTOR
 2 = BASE
 3 = EMITTER

STYLE 2:
 PIN1 = COLLECTOR
 2 = EMITTER
 3 = BASE

