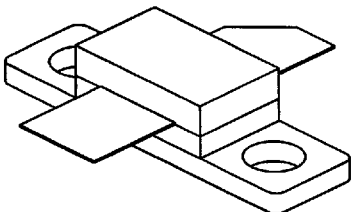


DME 375

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

GENERAL DESCRIPTION The DME 375 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 prematch for broadband capability. Low thermal resistance package reduces junction temperature, extends life.	CASE OUTLINE 55CX, STYLE 1 
ABSOLUTE MAXIMUM RATINGS Maximum Power Dissipation @ 25°C² 875 Watts Maximum Voltage and Current BVces Collector to Base Voltage 60 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 30 Amps 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
Pout	Power Out	F = 1025-1150 MHz	375			Watts
Pin	Power Input	Vcc = 50 Volts			75	Watts
Pg	Power Gain	PW = 10 µsec	7.0	8.0		dB
ηc	Collector Efficiency	DF = 1%		40		%
VSWR	Load Mismatch Tolerance	F = 1090 MHz			00.1	

BVebo	Emitter to Base Breakdown	Ie = 20 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 25 mA	60			Volts
Cob	Capacitance Collector to Base	Vcb = 50 Volts		20		Pf
hFE	DC - Current Gain	Ic = 1.0 mA, Vce = 5 V	10			
θjc ²	Thermal Resistance	Pulsed			0.8	°C/W

Note 1: At rated output power and pulse conditions
2: At rated pulse conditions

Issue August 1996

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GHZ Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

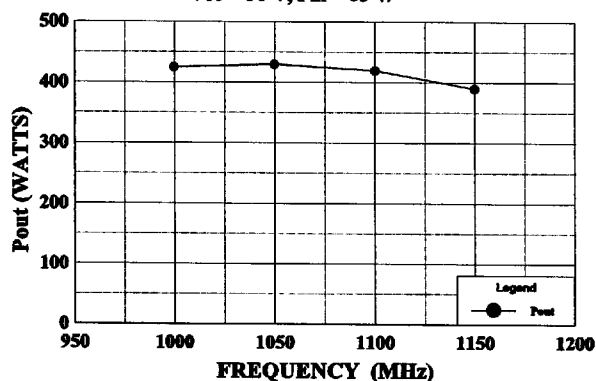
■ 9011110 0000056 910 ■



GHZ TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

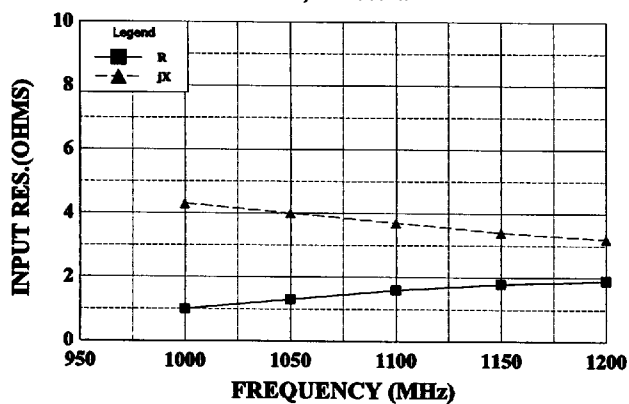
POWER OUTPUT vs FREQUENCY

Vcc = 50 V, Pin = 65 W



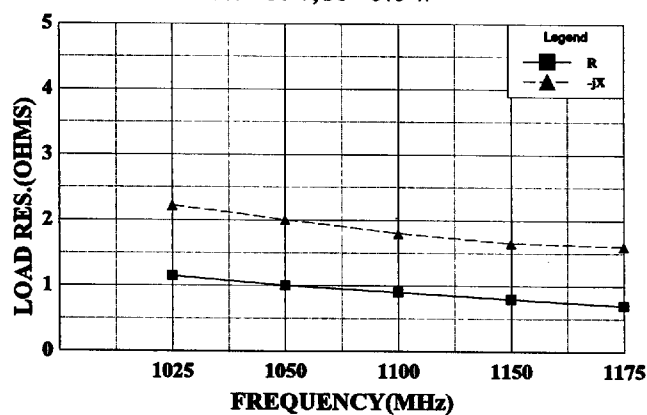
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 50 V, Po = 375 W



SERIES LOAD IMPEDANCE vs FREQUENCY

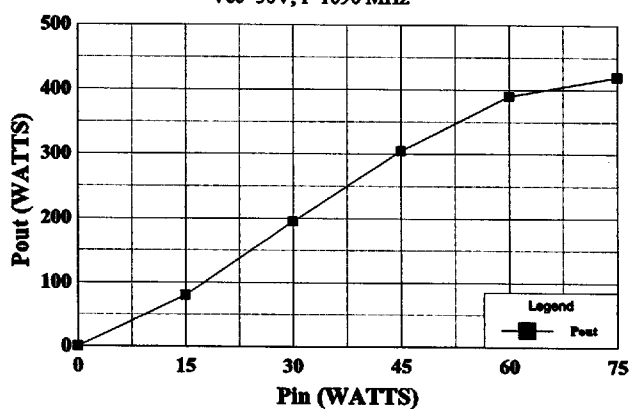
Vcc = 50 V, Po = 375 W



DME 375

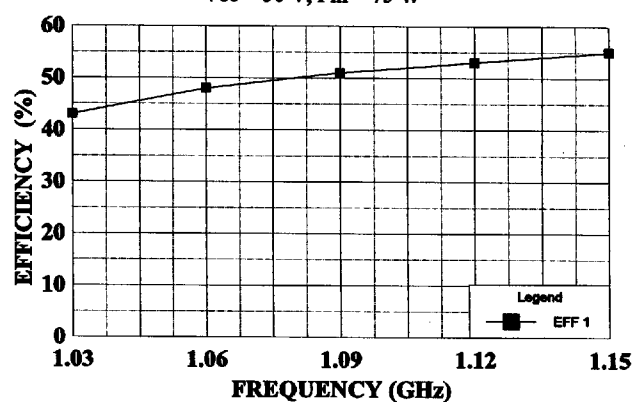
Pout vs Pin

Vcc=50V, f=1090 MHz



COLLECTOR EFFICIENCY

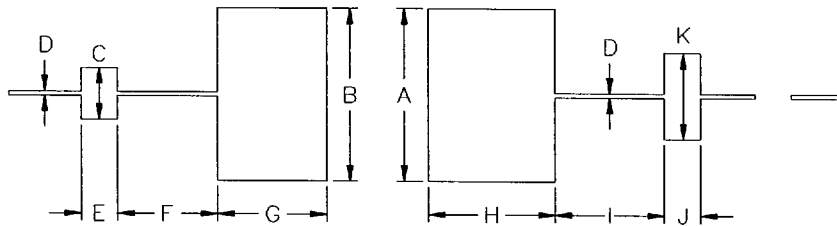
Vcc = 50 V, Pin = 75 W



9011110 0000057 857

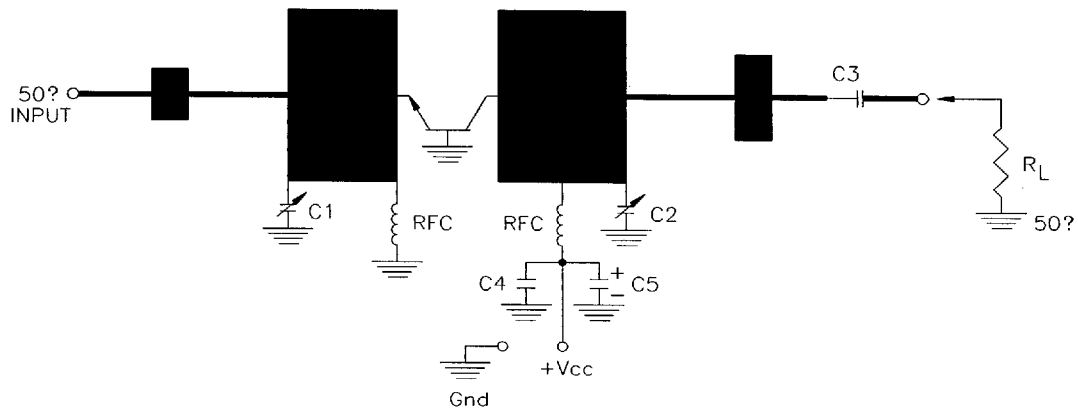
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	1.000
B	1.000
C	.300
D	.025
E	.200
F	.550
G	.600
H	.700
I	.600
J	.200
K	.500

DME 375 / TPR 400 TEST FIXTURE
1025-1150 MHz/1030/1090 MHz - TEST AMPLIFIER (FIG1)



- MICROSTRIP LINE: DUROID, 10 MIL DIELECTRIC D 5880, $\epsilon_r=2.33$
- C1, C2 - 0.6-6pf VAR. CAP.
- C3, C4 - 82 pf CHIP
- C5 - 200 MFD CAP.



CAGE
OPJR2

DWG NO.

DME 375 / TPR 400

REV —

SCALE

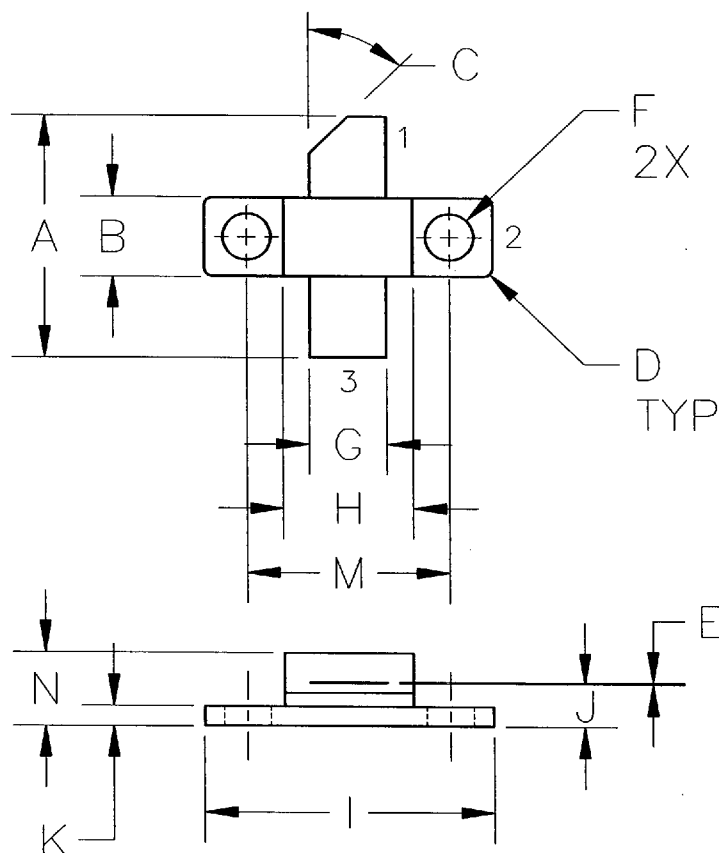
1/1

SHEET

9011110 0000058 793

REVISIONS

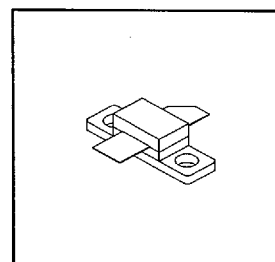
ZONE	REV	DESCRIPTION	DATE	APPROVED
------	-----	-------------	------	----------



DIM	MILLIMETER	TOL	INCHES	TOL
A	17.78	.76	.700	.030
B	5.84	.13	.230	.005
C	45°	5°	45°	5°
D	0.63R	.13	.025R	.005
E	.13	.02	.005	.001
F	3.30 DIA	.13	.130 DIA	.005
G	5.46	.13	.215	.005
H	9.14	.13	.360	REF
I	20.32	.13	.800	.005
J	3.17	.25	.125	.010
K	1.52	.13	.060	.005
M	14.22	.13	.560	.005
N	5.46	REF	.215	REF

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

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



CAGE
OPJR2

DWG NO.

55CX

REV
A

SCALE

2/1

SHEET

9011110 000059 62T

4