

**GENERAL DESCRIPTION**

- This device utilizes the most advanced design and process technologies. These features provide the most consistent and reliable chip and package combination designed, built and tested specifically for use in airborne DME.
- Gold thin-film metallization -- proven highest Mean Time to Failure.
  - Surface passivation -- eliminates contamination and extends life.
  - Eutectic die attach -- reduces junction temperature and extends MTF.
  - Gold controlled-loop wire bonding -- consistent RF performance.
  - Hermetically sealed low thermal-resistance packages -- reduce junction temperature and extend life.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Power Dissipation @ 25°C Case Temperature 875W

**Maximum Voltage and Current**

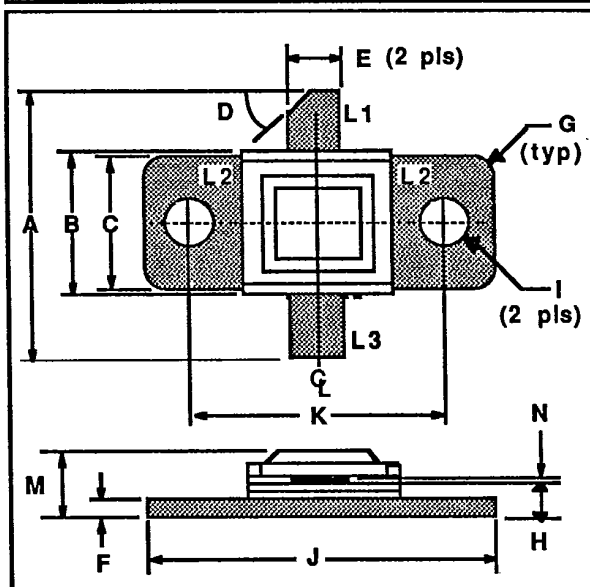
BVces Collector to Emitter Voltage 55 V  
 BVebo Emitter to Base Voltage 4.0 V  
 Ic Collector Current 30 A

**Maximum Temperatures**

Storage Temperature -65 to +200 °C  
 Operating Junction Temperature +200 °C

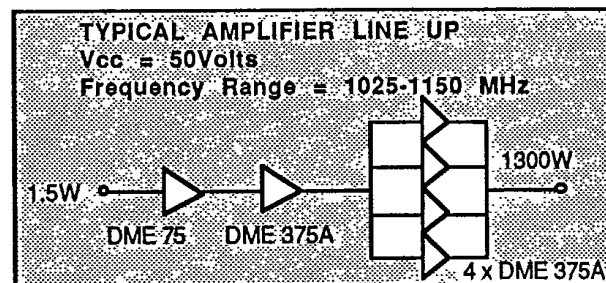
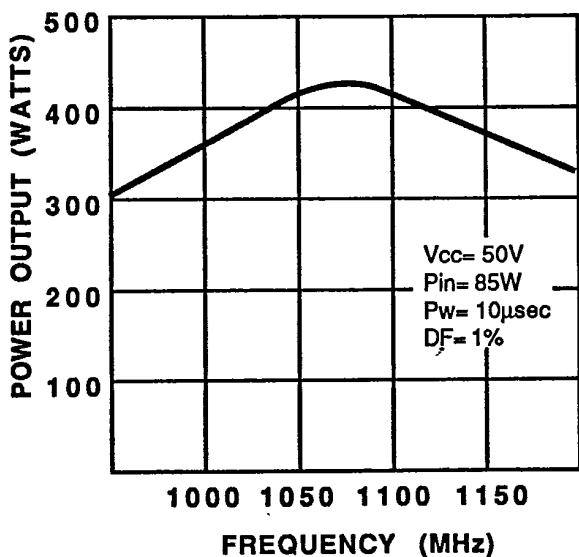
**DME 375A**  
 375 WATTS - 50 VOLTS  
 1025/1150 MHz

**AVIONICS**



DIM	Millimeter	TOL	Inches	TOL
L1 : c				
L2 : b				
L3 : e				
A	20.32	.76	.800	.030
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	1.52 R	.13	.060 R	.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	5.46	REF	.215	REF
N	0.13	.02	.005	.001

**(TYPICAL) POWER OUTPUT**



**DME 375A-2**

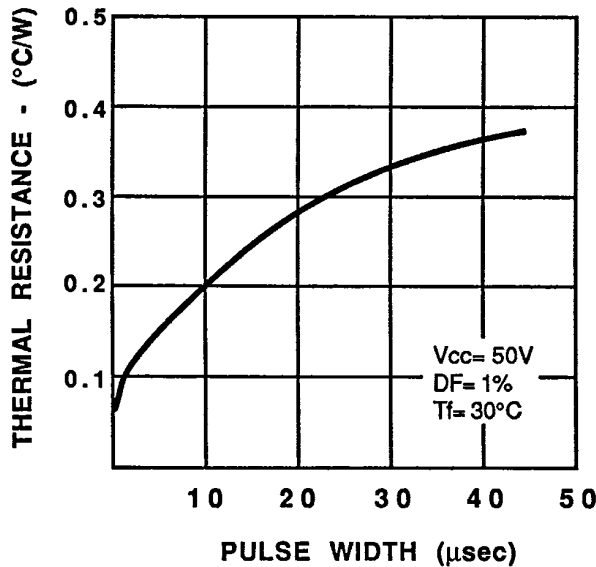
**ELECTRICAL CHARACTERISTICS<sup>1</sup>**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P <sub>out</sub>	Power Output	f= 1025 to 1150 MHz V <sub>cc</sub> = 50 Volts P <sub>w</sub> = 10μsec D <sub>f</sub> = 1%	375			Watts
P <sub>in</sub>	Power Input				85	Watts
P <sub>g</sub> <sup>2</sup>	Power Gain				6.5	dB
η <sub>c</sub> <sup>2</sup>	Collector Efficiency				40	%
VSWR <sup>2</sup>	Load Mismatch Tolerance				∞:1	
BV <sub>ebo</sub>	Breakdown Voltage (Emitter to Base)	I <sub>c</sub> = 0A, I <sub>e</sub> =20mA	4.0			Volts
BV <sub>ces</sub>	Breakdown Voltage (Collector to Emitter)	V <sub>be</sub> = 0A, I <sub>c</sub> = 25mA	55			Volts
h <sub>FE</sub>	DC-Current Gain	V <sub>c</sub> = 5V, I <sub>c</sub> = 300mA	10			
θ <sub>jc</sub>	Thermal Resistance				0.2	°C/W

Note 1: T<sub>c</sub> = +25°C unless otherwise specified

Note 2: At rated power output

**THERMAL RESISTANCE VS PULSE WIDTH**

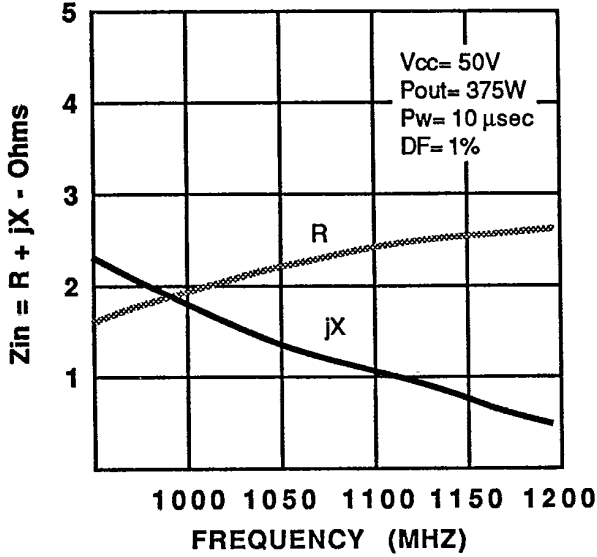


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

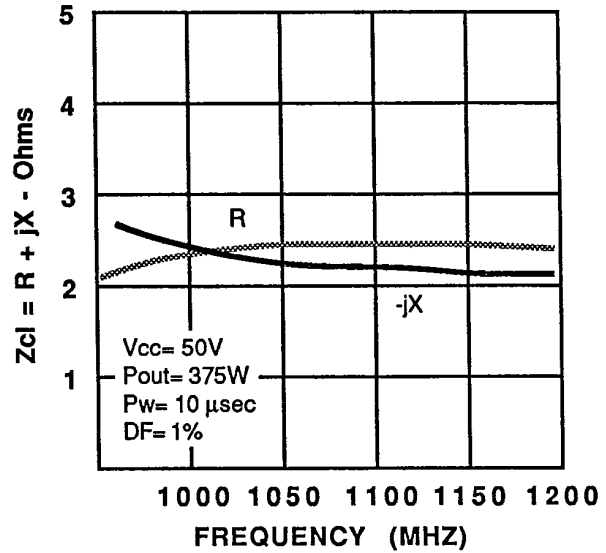
de

**DME375A-3**

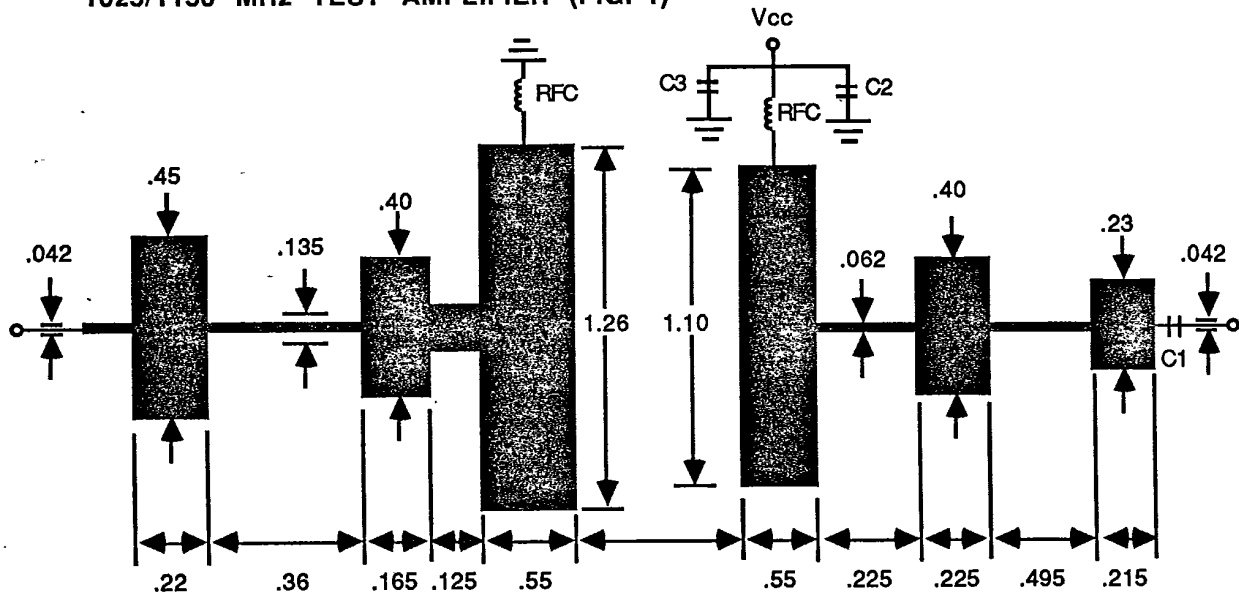
**SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)**



**SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)**



**1025/1150 MHz TEST AMPLIFIER (FIG. 1)**



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

dl