

**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 MTTF.
- \* Gold controlled-loop wire bonding -- consistent RF performance.
- \* Low thermal-resistance packages -- reduce junction temperature and extend life.
- \* Hermetic metal/ceramic seal for long term reliability.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Power Dissipation @ 25°C Case Temperature **875 W**

**Maximum Voltage and Current**

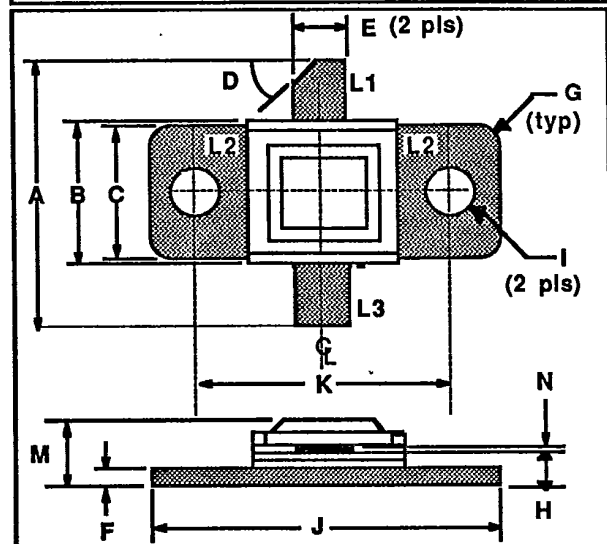
BVces Collector to Emitter Voltage **55 V**  
 BVebo Emitter to Base Voltage **4.0 V**  
 Ic Collector Current **30 A**

**Maximum Temperatures**

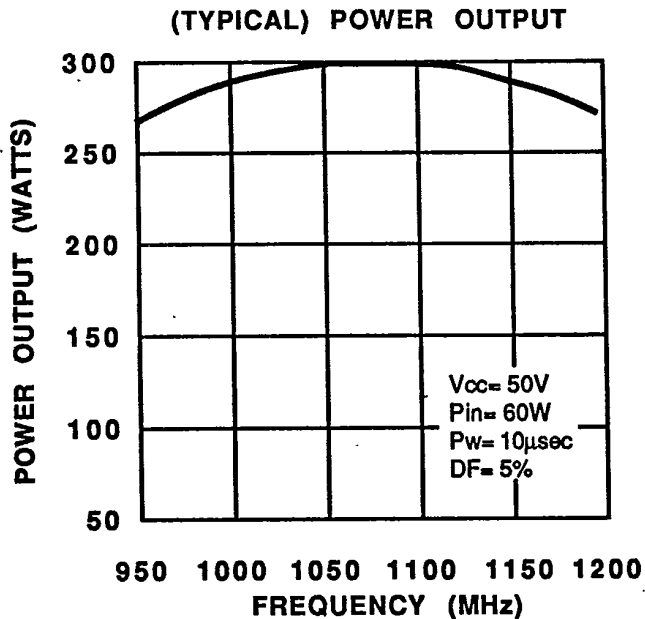
Storage Temperature **-65 to +200 °C**  
 Operating Junction Temperature **+200 °C**

**DMEG 250**  
**250 WATTS - 50 VOLTS**  
**960-1215 MHz**

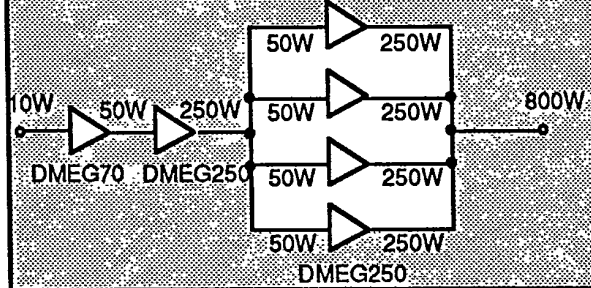
**AVIONICS**



DIM	Millimeter	TOL	Inches	TOL	
L1 : c	A	20.32	.76	.800	.030
L2 : b	B	10.16	.13	.400	.005
L3 : e	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 AMPLIFIER LINE UP**  
 Vcc = 50Volts  
 Frequency Range = 960-1215 MHz



**DMEG 250-2**

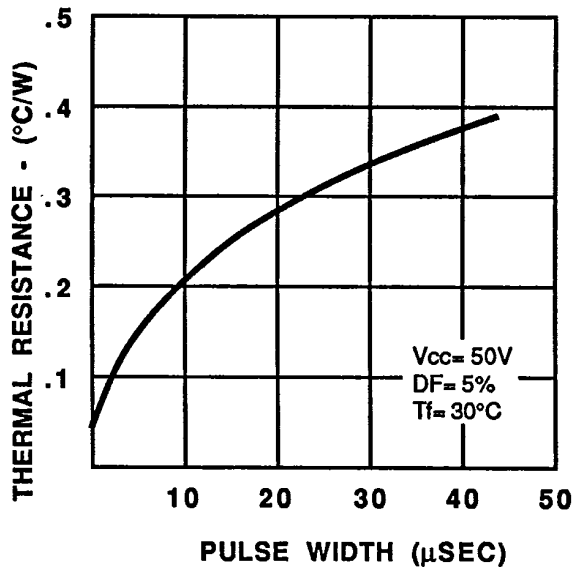
**ELECTRICAL CHARACTERISTICS<sup>1</sup>**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P <sub>out</sub>	Power Output	f = 960 to 1215 MHz V <sub>cc</sub> = 50V	250			Watts
P <sub>in</sub> <sup>2</sup>	Power Input				60	Watts
P <sub>g</sub>	Power Gain		6.2			dB
η <sub>c</sub>	Collector Efficiency			35		%
V <sub>SWR</sub>	Load Mismatch Tolerance				5:1	
B <sub>Vebo</sub>	Breakdown Voltage (Emitter to Base)	I <sub>c</sub> = 0A, I <sub>e</sub> = 20mA	4.0			Volts
B <sub>Vces</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> = 1A	10			
θ <sub>jc</sub>	Thermal Resistance				0.2	°C/W

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

Note 2: Pulse width 10μsec @ 5% duty

**THERMAL RESISTANCE VS PULSE WIDTH**

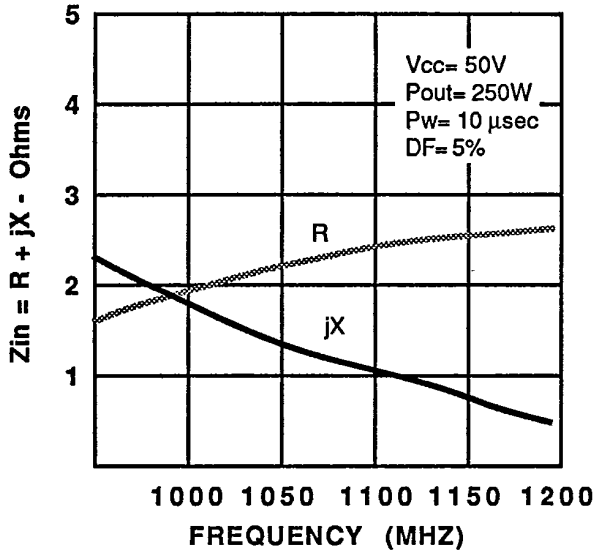


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

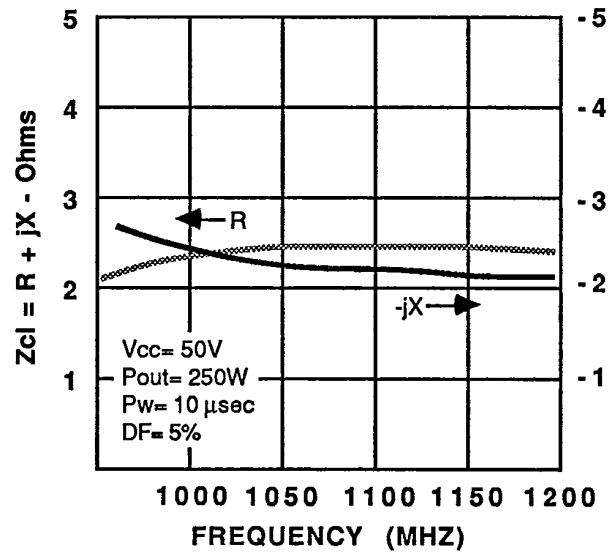
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**DMEG 250-3**

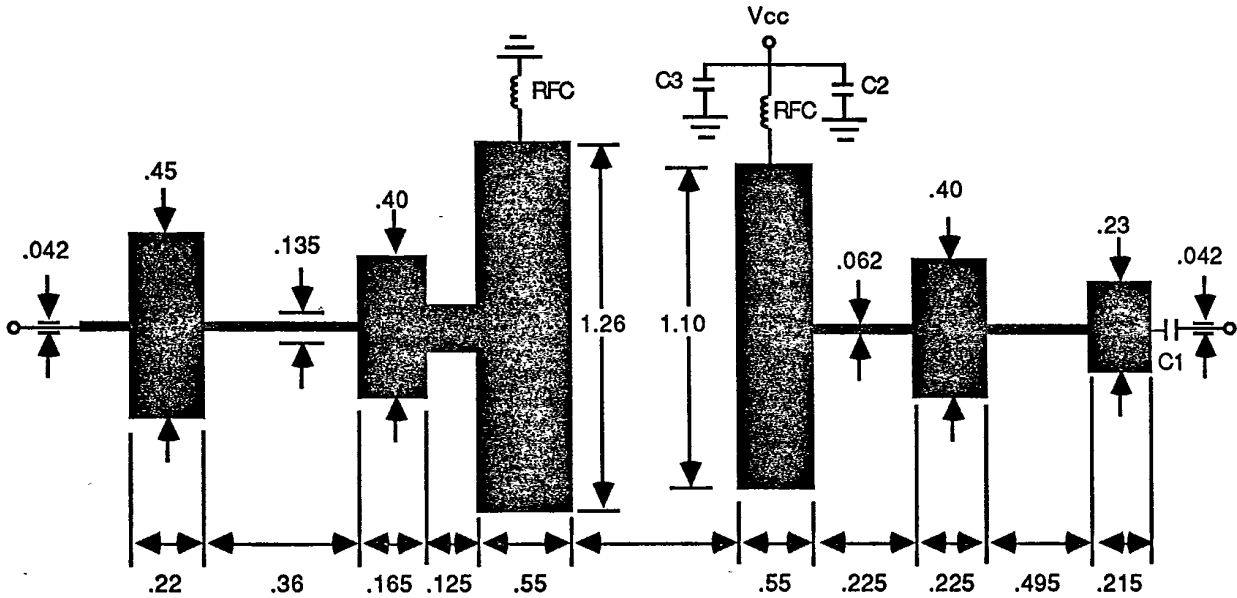
**SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)**



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



**960-1215 MHz BROADBAND TEST AMPLIFIER**



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

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