



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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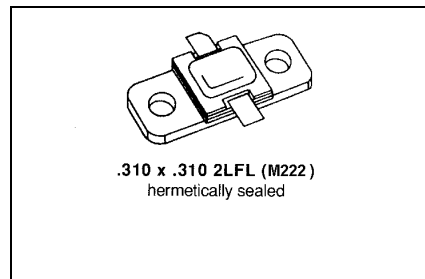


MS2212

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

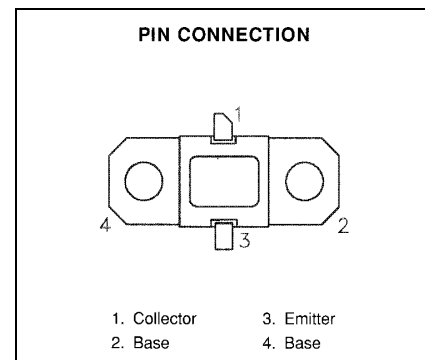
- 960-1215 MHz
- GOLD METALLIZATION
- EMITTER SITE BALLASTED
- Pout = 15W
- Gp = 8.1 dB MINIMUM
- INTERNAL IMPEDANCE MATCHING
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON BASE CONFIGURATION



DESCRIPTION:

The MS2212 is designed for specialized avionics applications, such as JTIDS, where maximum performance is required under a variety of pulse formats. Internal impedance matching provides superior broad band performance.

The MS2212 utilizes gold metallization and emitter ballasting to provide superior reliability and consistent performance under the most rugged pulse conditions.



ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V _{CC}	Collector-Supply Voltage*	32	V
I _C	Device Current*	1.8	A
P _{DISS}	Power Dissipation*	50	W
T _J	Junction Temperature	+250	°C
T _{STG}	Storage Temperature	- 65 to + 200	°C

Thermal Data

R _{TH(j-c)}	Junction-Case Thermal Resistance*	3.0	°C/W
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* Applies only to rated RF operation.

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA	I_E = 0 mA	55	----	----	V
BV_{CER}	I_C = 10 mA	R_{BE} = 10 Ω	55	----	----	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	3.5	----	----	V
I_{CES}	V_{CE} = 28 V	V_{BE} = 0 V	----	----	2.0	mA
h_{FE}	V_{CE} = 5 V	I_C = 500mA	15	----	150	----

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	15	----	----	W
η_C	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	45	49	----	%
G_P	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	8.1	8.9	----	dB

Note: Pulse Format: 6.4 μS on 6.6 μS off, repeat for 3.3 ms.
Duty Cycle: Burst 49.2%, overall 20.8%

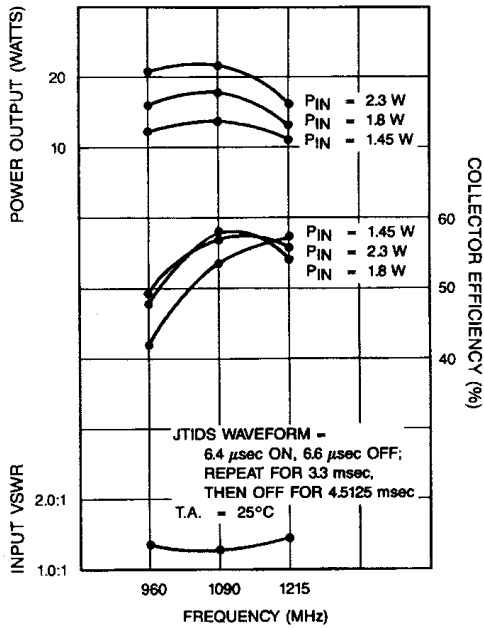
IMPEDANCE DATA:

FREQUENCY	Z _{in}	Z _{cl}
960 MHz	5.7 + j4.3	5.7 + j7.7
1090 MHz	5.8 + j2.5	4.3 + j6.5
1215 MHz	5.0 + j3.0	4.0 + j4.8

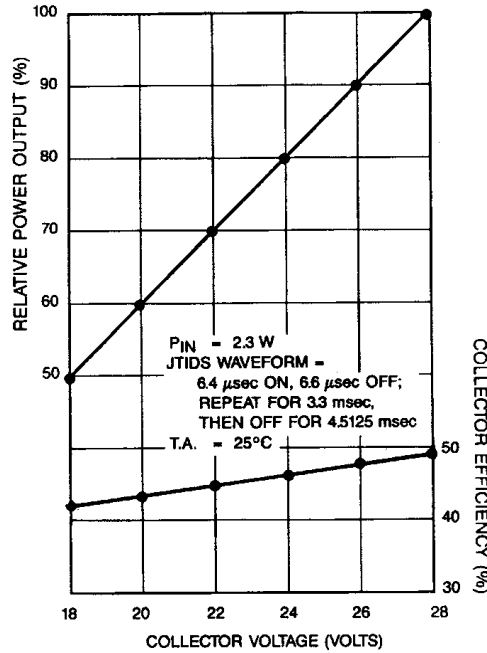
P_{IN} = 2.3W V_{CC} = 28V

TYPICAL PERFORMANCE

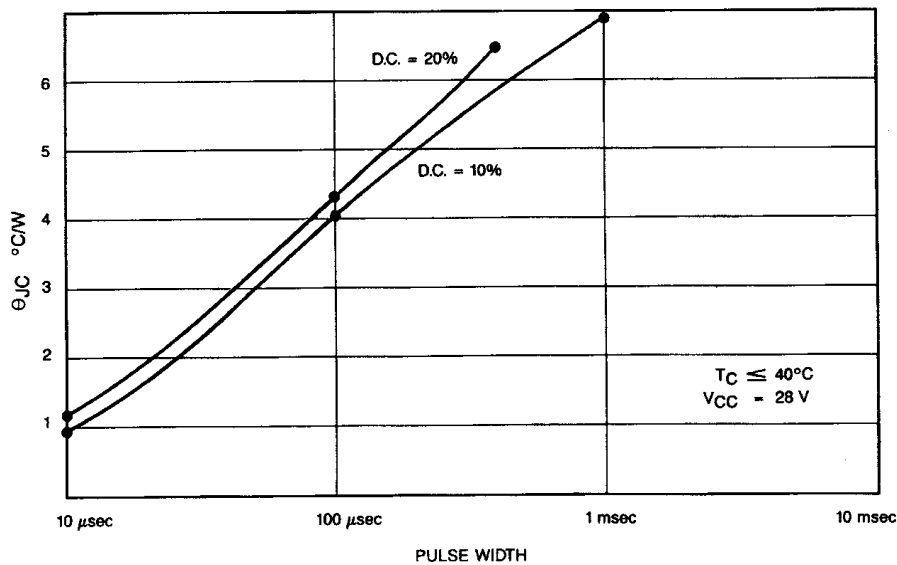
**TYPICAL BROADBAND
POWER AMPLIFIER**



**RELATIVE POWER OUTPUT &
COLLECTOR EFFICIENCY vs
COLLECTOR VOLTAGE**



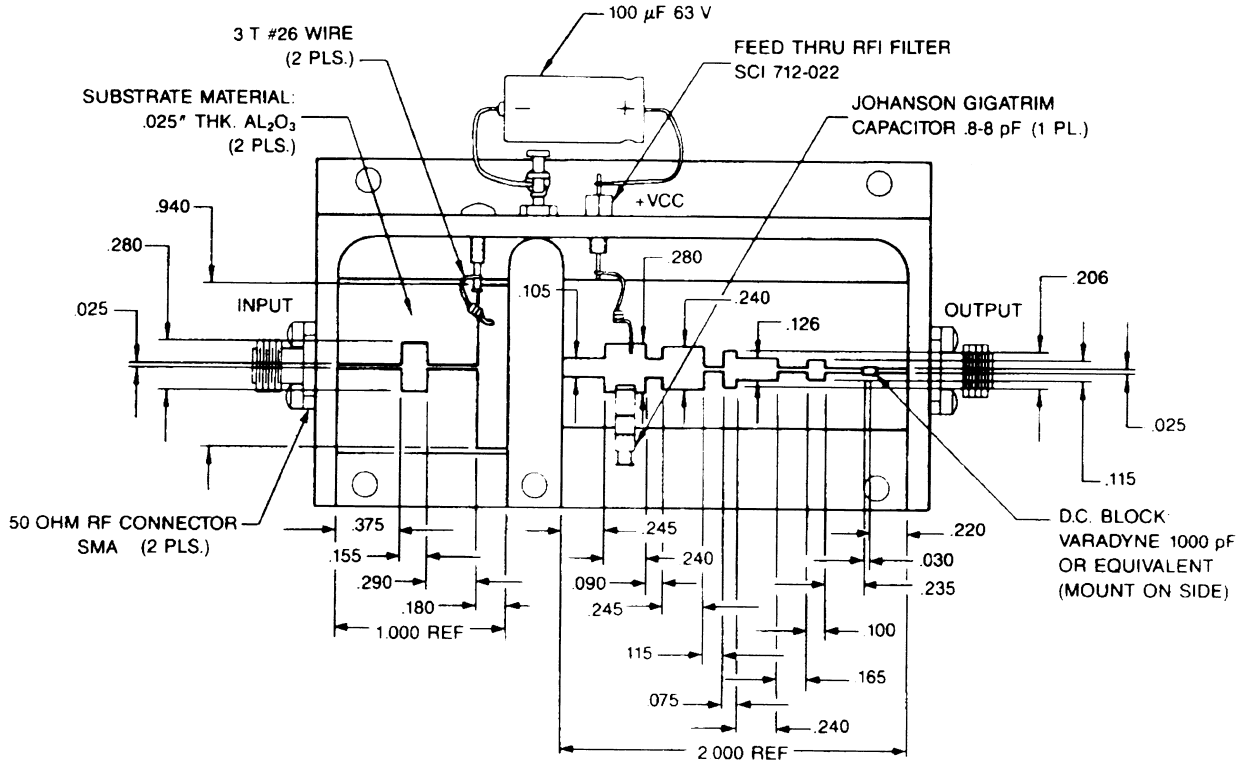
MAXIMUM THERMAL RESISTANCE vs PULSE WIDTH & DUTY CYCLE



MS2212

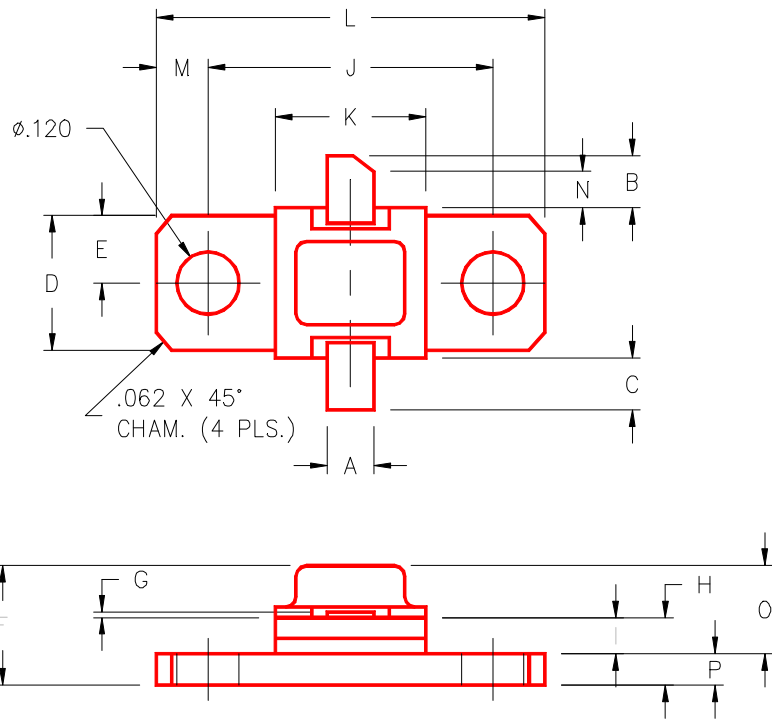
TEST CIRCUIT

Ref.: Dwg. No. 104-000284



PACKAGE MECHANICAL DATA

PACKAGE STYLE M222



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.100/2,54		J	.562/14,28	
B	.110/2,80		K	.310/7,87	
C	.110/2,80		L	.800/20,32	
D	.296/7,52		M	.119/3,02	
E	.148/3,76		N	.050/1,27	
F		.230/5,84	O		.170/4,32
G	.003/0,08	.006/0,15	P	.062/1,58	
H	.118/3,00	.131/3,33			
I	.059/1,50				