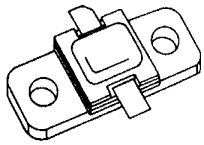
ADVANCED POWER TECHNOLOGY RF®

MS2212

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

- 960 – 1215 MHz
- 28 VOLTS
- INPUT/OUTPUT MATCHING
- P_{OUT} = 15 WATTS
- G_P = 8.1 dB MINIMUM
- COMMON BASE CONFIGURATION

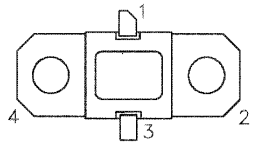


.310 x .310 2LFL (M222)
hermetically sealed

DESCRIPTION:

The MS2212 is designed for specialized avionics applications, including JTIDS where power is provided under pulse formats utilizing short pulse widths and highburst or overall duty cycles.

PIN CONNECTION



1. Collector
2. Base
3. Emitter
4. Base

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation	50	W
I_C	Device Current	1.8	A
V_{CC}	Collector - Supply Voltage	32	V
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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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

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

DYNAMIC

Symbol	Test Conditions			Value			
				Min.	Typ.	Max.	Unit
P_{OUT}	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	15	17	----	W
V_C	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	45	----	----	%
G_P	f = 960 - 1215 MHz	P_{IN} = 2.3 W	V_{CC} = 28 V	8.1	8.9	----	dB
Conditions	Pulse Format: 6.4 μs on 6.6 μs off, repeat for 3.3 ms, then off for 4.5125 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

Pin = 2.3 W
Vcc = 28V

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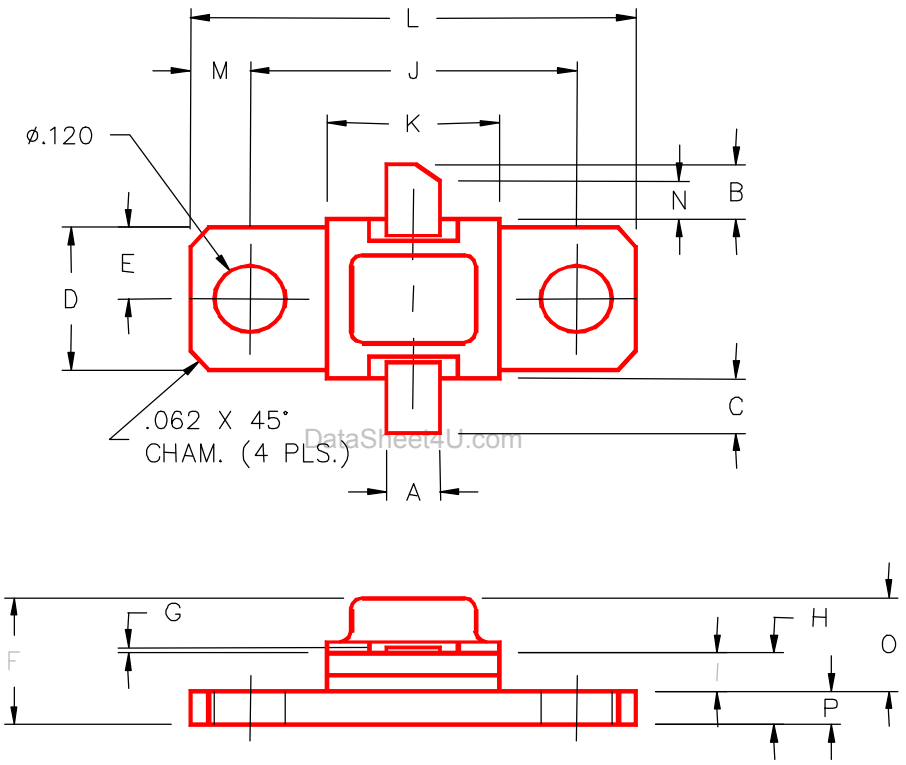
PACKAGE MECHANICAL DATA

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				