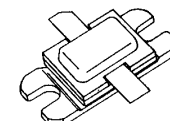


MS2210

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

- 255 MHz BANDWIDTH
- GOLD METALLIZATION
- EMITTER SITE BALLASTED
- Pout = 300W MINIMUM
- Gp = 7.0 dB
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- 15:1 VSWR CAPABILITY



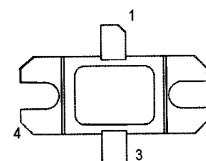
.400 x .500 2LFL (M216)
hermetically sealed

DESCRIPTION:

The MS2210 avionics power transistor is a broadband, high peak pulse power device specifically designed for avionics applications requiring broad bandwidth with moderate duty cycle and pulse width constraints such as ground/ship DME/TACAN. The MS2210 is also designed for specialized applications where reduced power is provided under pulse formats utilizing short pulse widths and high burst or overall duty cycles

This device is capable of withstanding 15:1 VSWR mismatch load conditions at any phase angle under full rated conditions.

PIN CONNECTION



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

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation*	940	W
I _C	Device Current*	24	A
V _{CC}	Collector-Supply Voltage*	50	
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 65 to + 200	°C

Thermal Data

R _{TH(j-c)}	Junction-Case Thermal Resistance*	0.16	°C/W
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- Applies only to rated RF operation.

MS2210

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I _C = 50 mA I _E = 0 mA	65	----	----	V
BV_{EBO}	I _E = 15 mA I _C = 0 mA	3.0	----	----	V
BV_{CER}	I _C = 50 mA R _{BE} = 10 Ω	65	----	----	V
I_{CES}	V _{CE} = 50 V	----	----	30	mA
h_{FE}	V _{CE} = 5 V I _C = 5A	10	----	---	----

DYNAMIC

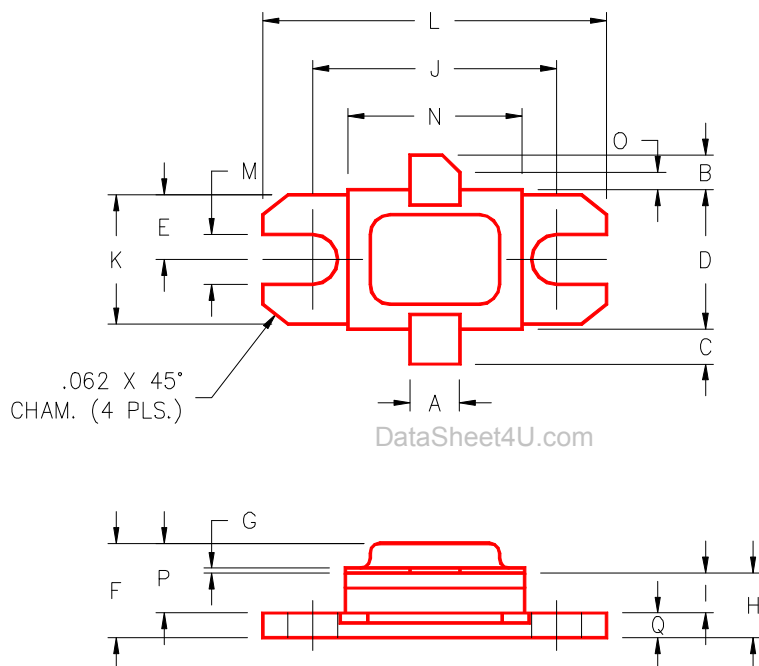
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 960 - 1215 MHz P _{IN} = 60 W V _{CC} = 50 V	300	330	----	W
η_C	f = 960 - 1215 MHz P _{IN} = 60 W V _{CC} = 50 V	38	45	----	%
G_P	f = 960 - 1215 MHz P _{IN} = 60 W V _{CC} = 50 V	7.0	7.4	----	dB
Note:	Pulse Format: 10 μS Duty Cycle: 10%				

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
960 MHz	2.0 + j3.6	1.7 - j2.2
1090 MHz	3.5 + j1.7	2.0 - j1.7
1215 MHz	1.6 + j0.5	1.8 - j2.0

PACKAGE MECHANICAL DATA

PACKAGE STYLE M216



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.140/3,56		J	.700/17,78	
B	.110/2,80		K	.386/9,80	
C	.110/2,80		L	.900/22,86	
D	.395/10,03	.407/10,34	M	.120/3,05	
E	.193/4,90		N	.500/12,70	
F		.230/5,84	O	.050/1,27	
G	.003/0,08	.006/0,15	P		.170/4,32
H	.118/3,00	.131/3,33	Q	.062/1,58	
I	.063/1,60				