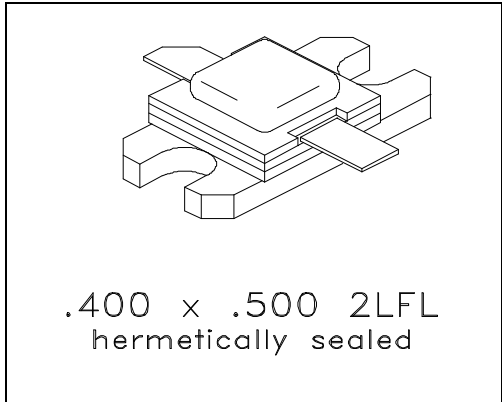


MS2215

**RF & MICROWAVE TRANSISTORS
 AVIONICS APPLICATIONS**

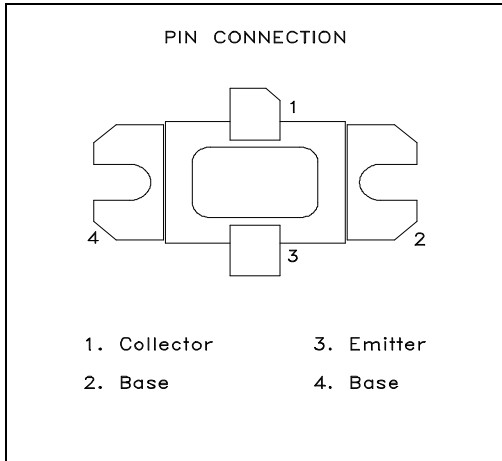
Features

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 150 \text{ W MIN. WITH } 7.5 \text{ dB Gain}$



DESCRIPTION:

The MS2215 is designed for specialized avionics applications, including Mode-S, TCAS and JTIDS where power is provided under pulse formats utilizing short pulse widths and high burst or overall duty cycles.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation * (T _c ≤ °C)	300	
I_c	Device Current *	16.5	A
V_{CC}	Collector - Supply Voltage *	35	V
T_J	Junction Temperature (Pulsed RF Operation)	250	°C
T_{STG}	Storage Temperature *	- 65 to + 200	°C

Thermal Data

$R_{TH(j-c)}$	Junction-Case Thermal Resistance *	0.57	°C/W
---------------	------------------------------------	------	------

* Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 60 mA I_E = 0 mA	55	65	----	V
BV_{EBO}	I_E = 10 mA I_C = 0 mA	3.5	----	----	V
BV_{CES}	I_C = 100 mA	55	----	----	V
I_{CES}	V_{CE} = 35 V	----	----	25	mA
h_{FE}	V_{CE} = 5V I_C = 5 A	20	----	----	----

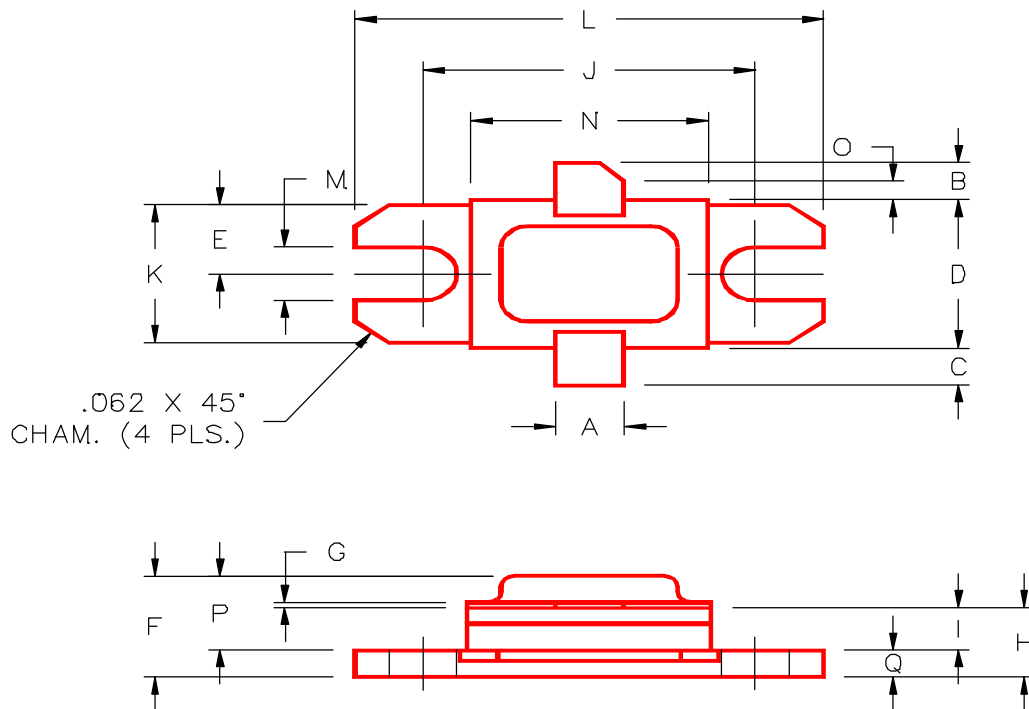
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 960 - 1215 MHz P_{IN} = 26.7 W V_{CC} = 35 V	150	----	----	W
η_C	f = 960 - 1215 MHz P_{IN} = 26.7 W V_{CC} = 35 V	45	----	----	%
G_P	f = 960 - 1215 MHz P_{IN} = 26.7 W V_{CC} = 35 V	7.5	----	----	dB

Note: 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%

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				