

MS2209

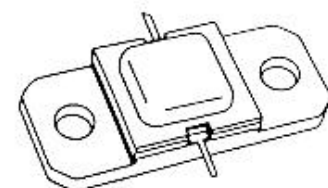
RF & MICROWAVE TRANSISTORS AVIONICS APPLICATION

Features

- REFRACTORY/GOLD METALIZATION
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- EMITTER SITE BALLASTED

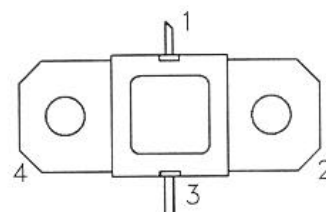
DESCRIPTION:

THE MS2209 AVIONICS POWER TRANSISTOR IS A BROADBAND, HIGH PEAK PULSE POWER DEVICE SPECIFICALLY DESIGNED FOR AVIONICS APPLICATIONS REQUIRING BROAD BANDWIDTH WITH MODERATED DUTY CYCLE AND PULSE WIDTH CONSTRAINTS SUCH AS GROUND/SHIP BASED DME/TACAN. THIS DEVICE IS ALSO CAPABLE OF SPECIALIZED APPLICATIONS INCLUDING JTIDS WITH REDUCED POWER UNDER PULSE FORMATS UTILIZING SHORT PULSE WIDTHS AND HIGH BURST OR OVERALL DUTY CYCLES.



.400 x .400 2NLFL (S042)
 hermetically sealed

PIN CONNECTION



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

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

Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation* (T _c ≤ 100°C)	220	W
I _c	Device Current *	7.0	A
V _{CC}	Collector Supply Voltage*	50	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	0.80	°C/W
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*Applies only to rated RF amplifier operation

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

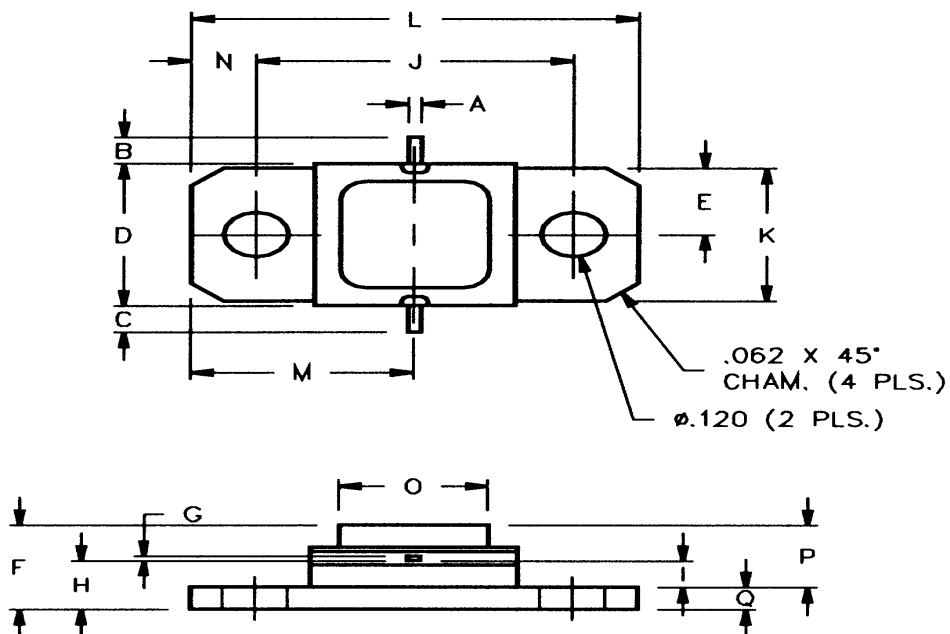
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
Bvebo	I _E = 10 mA	I _C = 0 mA	3.0	---	---	V
Bvcbo	I _C = 40 mA	I _E = 0 mA	65	---	---	V
Bvcer	I _C = 40 mA	R _{BE} = 10Ω	65	---	---	V
Icbo	V _{CB} = 50V		---	---	12	mA
HFE	V _{CE} = 5.0 V	I _C = 2 A	20	---	120	B

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{out}	f = 960-1215 MHz	P _{in} = 13W	V _{CC} = 50V	90	100	---	W
η _c	f = 960-1215 MHz	P _{in} = 13W	V _{CC} = 50V	38	44	---	%
G _p	f = 960-1215 MHz	P _{in} = 13W	V _{CC} = 50V	8.4	---	---	dB
Conditions	Pulse width = 10μsec, Duty Cycle = 10%						

PACKAGE MECHANICAL DATA



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.025/0,64		J	.650/16,51	
B	.100/2,54		K	.386/9,80	
C	.100/2,54		L	.900/22,86	
D	.395/10,03	.407/10,34	M	.450/11,43	
E	.193/4,90		N	.125/3,18	
F		.230/5,84	O	.405/10,29	
G	.004/0,10	.007/0,18	P	.170/4,32	
H	.118/3,00	.131/3,33	Q	.062/1,58	
I	.063/1,60				