

**MS2092****RF & MICROWAVE TRANSISTORS****DESCRIPTION**

The MS2092 is an internally matched, common base silicon bipolar device optimized pulsed application in the 600 – 750 MHz frequency range.

Housed in the industry standard AMPAC™ metal/ceramic package, this device uses a refractory/gold overlay die geometry for ruggedness and long-term reliability.

KEY FEATURES

- Refractory/Gold Metallization
- Internal Input Matching
- Metal/Ceramic Hermetic Package
- $P_{OUT} = 440 \text{ W Min.}$
- $G_P = 7.0 \text{ dB Gain}$

APPLICATIONS/BENEFITS

- Avionics Applications

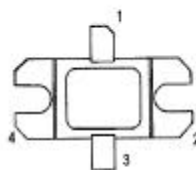
ABSOLUTE MAXIMUM RATINGS ($T_{CASE} = 25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C = 75^{\circ}\text{C}$)	1500	W
I_C	Device Current*	32.0	A
V_{CC}	Collector-Supply Voltage*	55	V
T_J	Junction Temperature	200	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-65 to +200	$^{\circ}\text{C}$

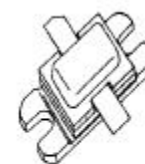
THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.13	$^{\circ}\text{C/W}$
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* Applies only to rated RF amplifier operation

PIN CONNECTION

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



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

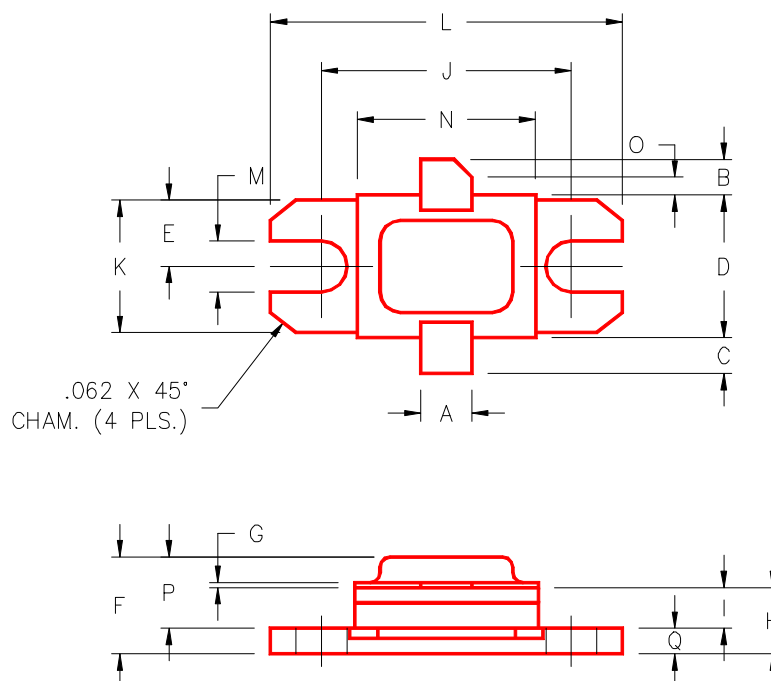
**MS2092****RF & MICROWAVE TRANSISTORS****STATIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)**

Symbol	Test Conditions	MS2091			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 50 mA I_E = 0 mA	65	—	—	V
BV_{EBO}	I_E = 5 mA I_C = 0 mA	3.5	—	—	V
BV_{CER}	I_C = 50mA R_{BE} = 10 Ω	65	—	—	V
I_{CES}	V_{CE} = 50 V	—	—	35	mA
I_{CBO}	V_{CB} = 50 V	—	—	25	mA
h_{FE}	V_{CE} = 5 V I_C = 1 A	15	—	120	—

DYMANIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)

Symbol	Test Conditions	MS2091			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 600 – 750 MHz P_{IN} = 90 W V_{CC} = 50 V	445	—	—	W
η_C	f = 600 – 750 MHz P_{IN} = 90 W V_{CC} = 50 V	35	—	—	%
G_P	f = 600 – 750 MHz P_{IN} = 90 W V_{CC} = 50 V	7.0	—	—	dB

Note: Pulse width = 10μSec
 Duty Cycle = 1%

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				