

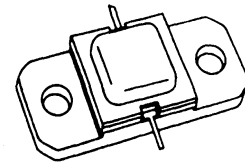
MS2218
**RF & MICROWAVE TRANSISTORS
L-BAND RADAR APPLICATIONS**
Features

- 1.2 – 1.4 GHz
- 28 VOLTS
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- P_{OUT} = 55 WATTS
- GP = 6.6 dB MINIMUM
- INPUT/OUTPUT MATCHING
- COMMON BASE CONFIGURATION

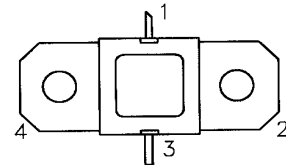
DESCRIPTION:

The MS2218 is a NPN silicon bipolar transistor designed for L-Band pulsed radar applications. This device utilizes an overlay die geometry to provide superior reliability under long pulse width and high duty cycle applications.

Computer controlled, automatic wirebonding and internal impedance matching assures consistent broadband performance.



.400 X .400 2NLFL
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*	107	W
I _C	Device Current*	5.0	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*	1.4	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{cbo}	I _C = 20 mA	I _E = 0 mA	55	---	---	V
BV _{cer}	I _E = 2 mA	I _C = 0 mA	3.5	---	---	V
BV _{ebo}	I _C = 40 mA	R _{BE} = 10Ω	55	---	---	V
I _{ces}	V _{CE} = 28 V	V _{BE} = 0 V	---	---	10	mA
HFE	V _{CE} = 5 V	I _C = 2 A	15	---	150	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1215 - 1400 MHz	P _{IN} = 12W	V _{CC} = 28V	55	---	---	W
η _C	f = 1215 - 1400 MHz	P _{IN} = 12W	V _{CC} = 28V	50	---	---	%
G _p	f = 1215 - 1400 MHz	P _{IN} = 12W	V _{CC} = 28V	6.6	---	---	dB
Conditions	Pulse Width = 1.0mS Duty Cycle = 10%						

IMPEDANCE DATA

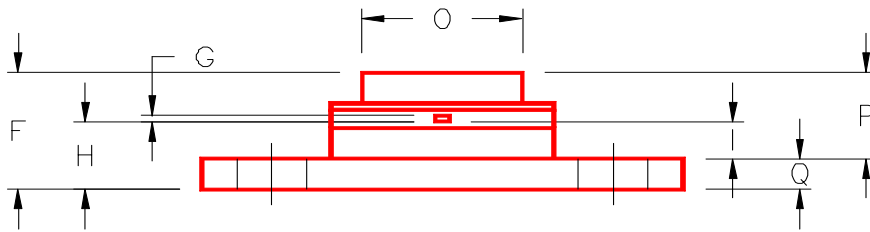
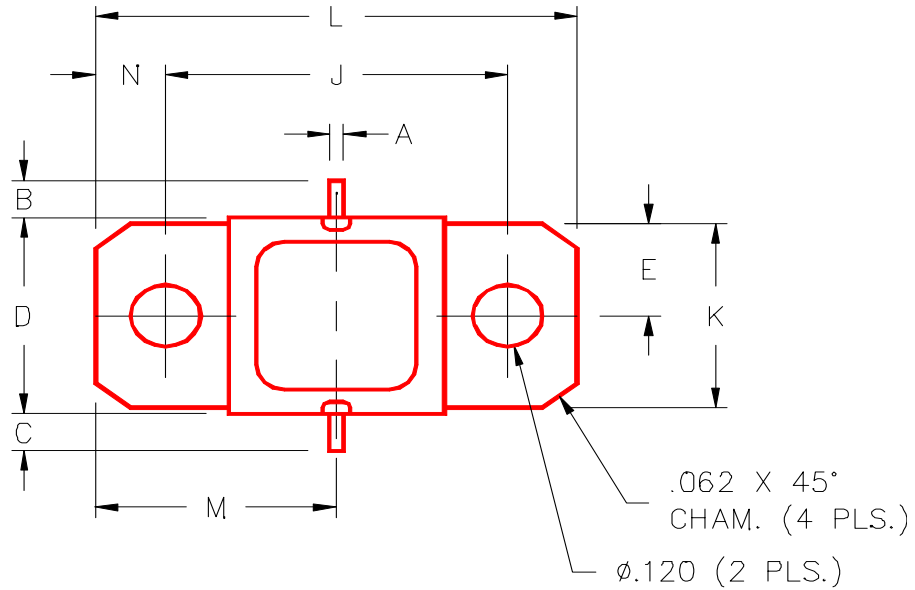
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1.2 GHz	6.0 + j10	7.0 - j10
1.3 GHz	4.5 + j11	6.0 - j9.5
1.4 GHz	4.0 + j9.0	5.0 - j9.0

P_{IN} = 12W

V_{CC} = 28V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M218



	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				