



**THE DATASHEET OF  
MS2361**

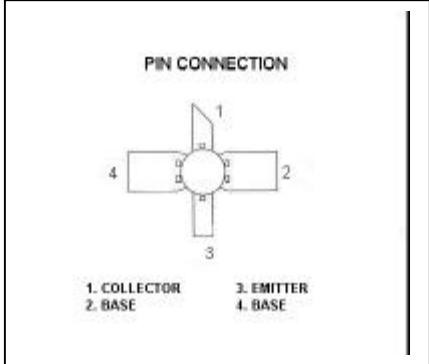
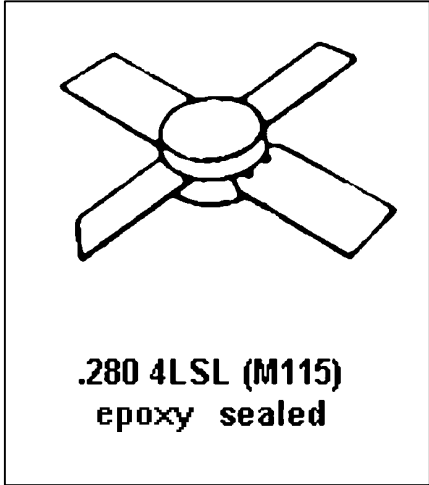


**MS2361**

**RF & MICROWAVE TRANSISTORS  
AVIONICS APPLICATIONS**

**Features**

- DESIGNED FOR HIGH POWER PULSED IFF, DME, TACAN, APPLICATIONS
- 80 WATTS (typ.) IFF 1030 – 1090 MHz
- 75 WATTS (min.) DME 1025 – 1150 MHz
- 50 WATTS (typ.) TACAN 960 – 1215 MHz
- 7.6 dB MIN. GAIN
- REFRACTORY GOLD METALLIZATION
- EMITTER BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- INFINITE LOAD VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



**DESCRIPTION:**

The MS2361 is a gold metallized silicon, NPN power transistor designed for applications requiring high peak power and low duty cycles such as IFF, DME and TACAN. The MS2361 is packaged in the 0.280" input matched stripline package resulting in improved broadband performance and a low thermal resistance.

**ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	65	V
V <sub>CES</sub>	Collector-Emitter Voltage	65	V
V <sub>EBO</sub>	Emitter-Base Voltage	3.5	V
I <sub>C</sub>	Device Current	5.5	A
P <sub>DISS</sub>	Power Dissipation	218.7	W
T <sub>J</sub>	Junction Temperature	+200	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C

**Thermal Data**

R <sub>TH(J-C)</sub>	Junction-case Thermal Resistance	0.8	°C/W
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## ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)

### STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV <sub>CBO</sub>	I <sub>C</sub> = 10mA	I <sub>E</sub> = 0mA	65	---	---	V
BV <sub>CES</sub>	I <sub>C</sub> = 25mA	V <sub>BE</sub> = 0V	65	---	---	V
BV <sub>EBO</sub>	I <sub>E</sub> = 10mA	I <sub>C</sub> = 0mA	3.5	---	---	V
I <sub>CES</sub>	V <sub>CE</sub> = 50V	I <sub>E</sub> = 0mA	---	---	5	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5V	I <sub>C</sub> = 100mA	10	---	---	---

### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 1025 - 1150 MHz	P <sub>IN</sub> = 13.0W	V <sub>CE</sub> = 50V	75	---	---	W
G <sub>P</sub>	f = 1025 - 1150 MHz	P <sub>IN</sub> = 13.0W	V <sub>CE</sub> = 50V	7.6	---	---	dB

Note: Pulse Width = 10us, Duty Cycle = 1%  
 This device is suitable for use under other pulse width/duty cycle conditions.  
 Please contact the factory for specific application assistance.

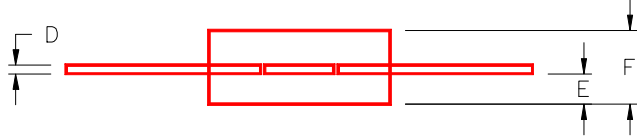
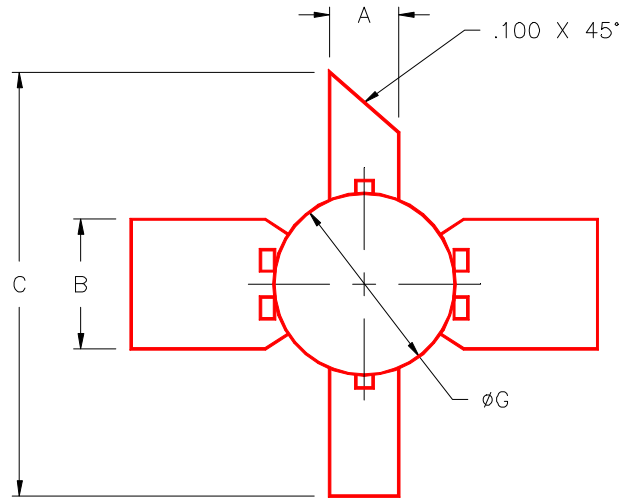
### IMPEDANCE DATA

FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
960 MHz	2.5 + j 13.0	4.6 + j 5.5
1030 MHz	5.2 + j 15.0	5.0 + j 5.5
1090 MHz	16.3 + j 15.0	4.8 + j 5.5
1150 MHz	14.7 + j 2.5	4.7 - j 7.0
1215 MHz	7.6 + j 0.5	4.7 - j 5.0

P<sub>IN</sub> = 13W  
 V<sub>CC</sub> = 50V  
 Pulse Width = 10uSec  
 Duty Cycle = 1%

**PACKAGE MECHANICAL DATA**

PACKAGE STYLE M115



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.095/2,41	.105/2,67			
B	.195/4,95	.205/5,21			
C	1.000/25,40				
D	.004/0,10	.007/0,18			
E	.050/1,27	.065/1,65			
F	.120/3,05	.135/3,43			
G	.275/6,99	.285/7,21			

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