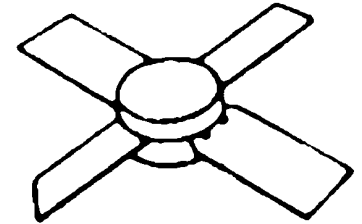


# MS2341

## RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

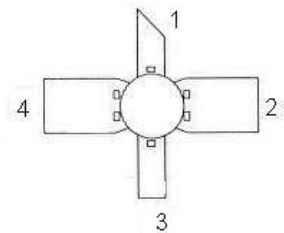
### Features

- DESIGNED FOR HIGH POWER PULSED IFF, DME, AND TACAN APPLICATIONS
- 40 W (typ.) IFF 1030–1090 MHz
- 35 W (min.) DME 1025–1150 MHz
- 25 W (typ.) TACAN 960–1215 MHz
- 960 - 1215 MHz
- GOLD METALLIZATION
- Pout = 25 W MINIMUM
- Gp = 9.0 dB
- INTERNAL INPUT MATCHING
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON BASE CONFIGURATION



**.280 4LSL (M115)  
epoxy sealed**

### PIN CONNECTION



1. COLLECTOR      3. EMITTER  
2. BASE            4. BASE

### DESCRIPTION:

The MS2341 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 MS2341 utilizes internal impedance matching for improved broadband performance.

### ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 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	2.6	A
P <sub>DISS</sub>	Power Dissipation	87.5	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	2.0	°C/W
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## ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)

### STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>BV<sub>CBO</sub></b>	<b>I<sub>C</sub> = 20 mA</b> <b>I<sub>E</sub> = 0 mA</b>	<b>60</b>	---	---	<b>V</b>
<b>BV<sub>CES</sub></b>	<b>I<sub>C</sub> = 20 mA</b> <b>V<sub>BE</sub> = 0 V</b>	<b>60</b>	---	---	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 2.0 mA</b> <b>I<sub>C</sub> = 0 mA</b>	<b>3.5</b>	---	---	<b>V</b>
<b>I<sub>CBO</sub></b>	<b>V<sub>CB</sub> = 50 V</b> <b>I<sub>E</sub> = 0 mA</b>	---	---	<b>2</b>	<b>mA</b>

### DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 1025 - 1150 MHz</b> <b>P<sub>IN</sub> = 5.6 W</b> <b>V<sub>CE</sub> = 50V</b>	<b>35</b>	---	---	<b>W</b>
<b>G<sub>p</sub></b>	<b>f = 1025 - 1150 MHz</b> <b>P<sub>IN</sub> = 5.6 W</b> <b>V<sub>CE</sub> = 50V</b>	<b>9.0</b>	---	---	<b>dB</b>

Conditions:      Pulse Width = 10 μs    Duty Cycle = 1%

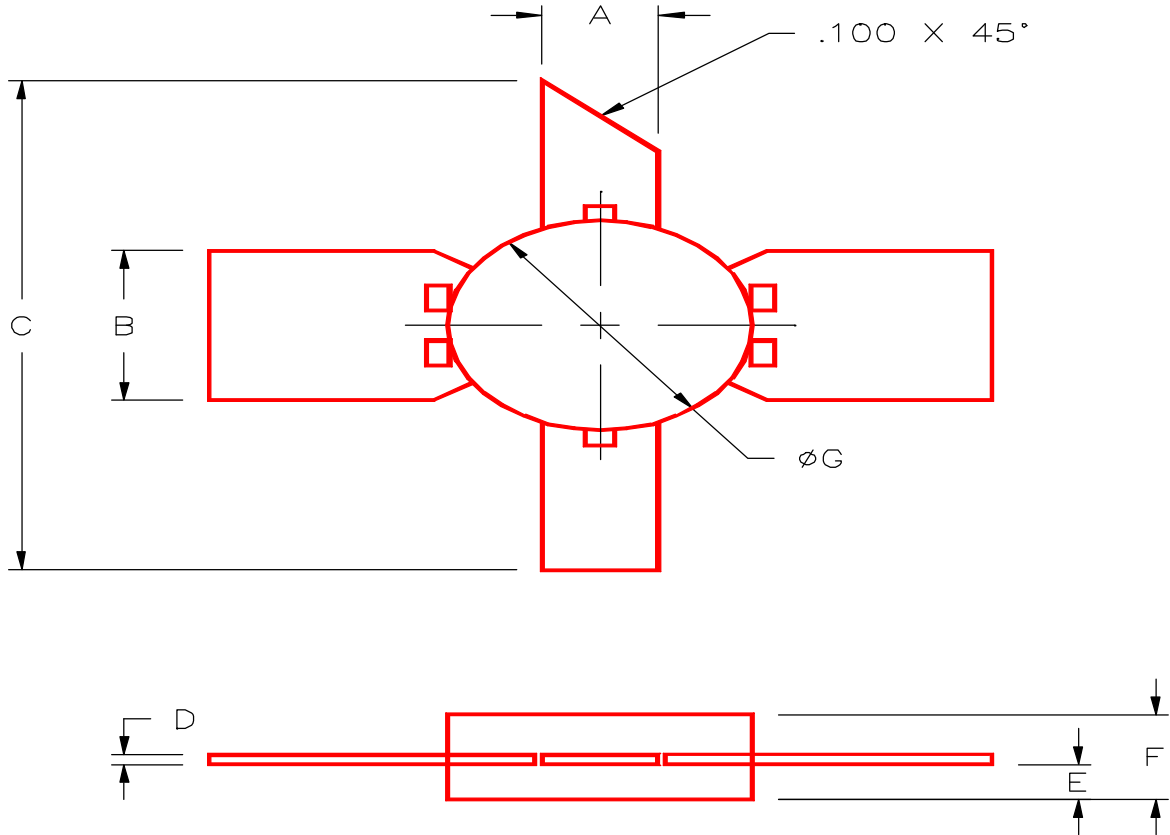
### IMPEDANCE DATA

FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
1025 MHz	2.7 + j9.1	16 - j5.8
1090 MHz	2.9 + j9.8	11 - j3.9
1150 MHz	2.8 + j11.7	11.4 - j4.7

MS2341

**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			