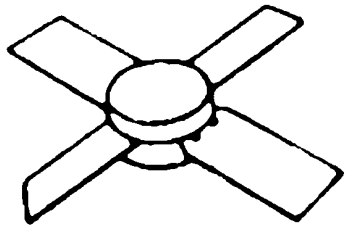
ADVANCED POWER TECHNOLOGY RF®
140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
FAX: (215) 631-9855

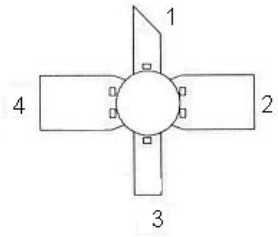
MS2341

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS



.280 4LSL (M115)
epoxy sealed

PIN CONNECTION



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

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

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 (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	65	V
V_{CES}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Device Current	2.6	A
P_{DISS}	Power Dissipation	87.5	W
T_J	Junction Temperature	200	ºC
T_{STG}	Storage Temperature	-65 to +150	ºC

Thermal Data

$R_{TH(J-C)}$	Junction-case Thermal Resistance	2.0	°C/W

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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 20 mA	I_E = 0 mA	60	---	---	V
BV_{CES}	I_C = 20 mA	V_{BE}= 0 V	60	---	---	V
BV_{EBO}	I_E = 2.0 mA	I_C = 0 mA	3.5	---	---	V
I_{CBO}	V_{CB} = 50 V	I_E = 0 mA	---	---	2	mA

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 1025 - 1150 MHz	P_{IN} = 5.6 W	V_{CE} = 50V	35	---	---	W
G_P	f = 1025 - 1150 MHz	P_{IN} = 5.6 W	V_{CE} = 50V	9.0	---	---	dB

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

IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
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

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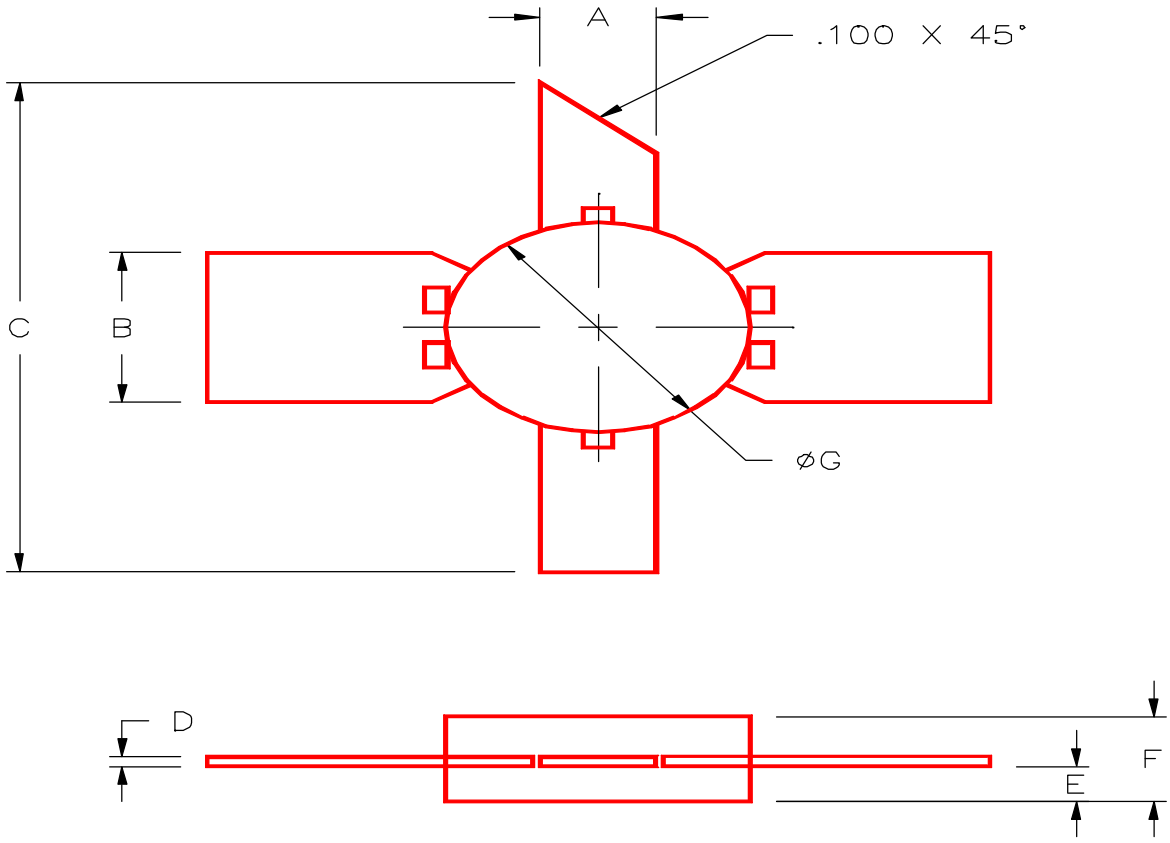
PACKAGE MECHANICAL DATA

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			