Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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ADVANCED POWER TECHNOLOGY RF®

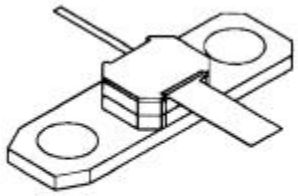
140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
FAX: (215) 631-9855

SD1536-08

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

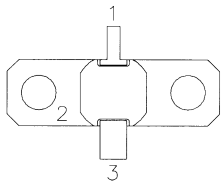
Features

- 1025 – 1150 MHz
- 50 VOLTS
- P_{OUT} = 90 WATTS
- G_P = 8.4 dB MINIMUM
- INPUT MATCHED
- COMMON BASE CONFIGURATION



.250 SQ. 2LFL (M105)
hermetically sealed

PIN CONNECTION



1. Collector
2. Base
3. Emitter

DESCRIPTION:

The SD1536-08 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. Internal Impedance matching provides improved broadband performance.

ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 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	10	A
P_{DISS}	Power Dissipation	292	W
T_J	Juction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

THERMAL DATA

$R_{TH(J-C)}$	Junction-Case Thermal Resistance	0.60	°C/W

ADVANCED POWER TECHNOLOGY RF®

SD1536-08

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA	I_E = 0 mA	65	---	---	V
BV_{CER}	I_C = 25 mA	R_{BE} =10 Ω	65	---	---	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	3.5	---	---	V
I_{CES}	V_{CE} = 50 V	I_E = 0 mA	---	---	10	mA
H_{FE}	V_{CE} = 5 V	I_C = 100 mA	5	---	---	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 1025 - 1150MHz	P_{IN} = 13.0 W	V_{CE} = 50 V	90	---	---	W
G_P	f = 1025 - 1150MHz	P_{IN} = 13.0 W	V_{CE} = 50 V	8.4	---	---	dB

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

IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
960 MHz	2.8 + j7.5	6.4 – j1.3
1050 MHz	3.9 + j8.2	5.8 – j1.4
1150 MHz	4.3 + j4.3	5.0 – j0.0
1215 MHz	4.9 + j4.3	4.8 – j0.0

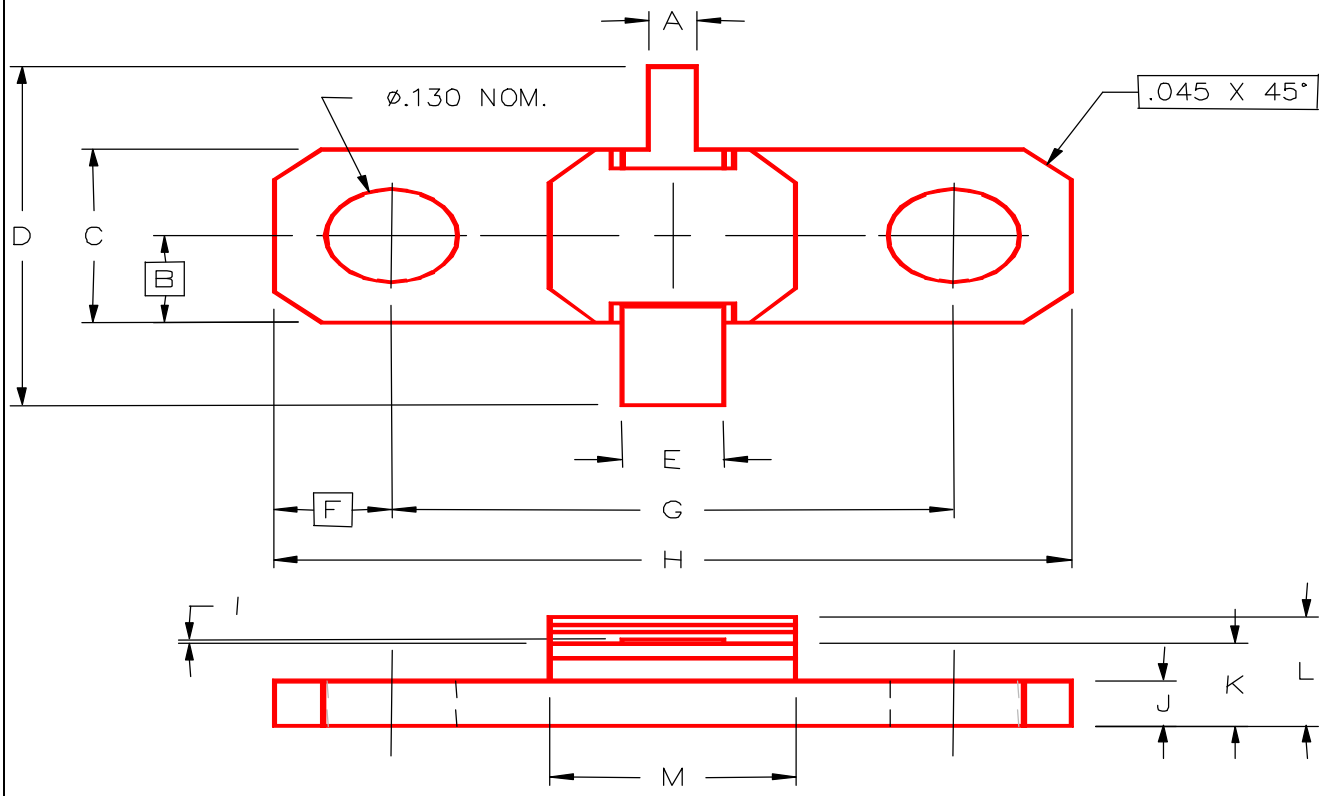
P_{IN} = 13W
V_{CE} = 50 V

ADVANCED POWER TECHNOLOGY RF®

SD1536-08

PACKAGE MECHANICAL DATA

PACKAGE STYLE M105



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.045/1,14	.055/1,40	I	.002/0,05	.006/0,15
B	.125/3,18		J	.057/1,45	.067/1,70
C	.245/6,22	.255/6,48	K	.112/2,84	.132/3,35
D	1.235/31,37		L		.175/4,45
E	.095/2,41	.105/2,67	M	.245/6,48	.405/10,29
F	.120/3,05				
G	.557/14,15	.567/14,40			
H	.795/20,19	.805/20,45			