

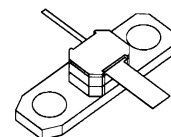
RF & MICROWAVE TRANSISTORS L-BAND AVIONICS APPLICATIONS

Features

- 1025 - 1150 MHz
- 28 VOLTS
- $P_{OUT} = 5.0$ WATTS
- $G_P = 9.5$ dB MINIMUM
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON BASE CONFIGURATION

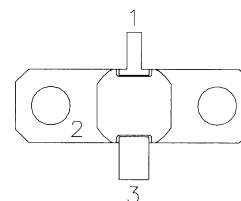
DESCRIPTION:

The SD1526-08 is a gold metalized, silicon NPN power transistor designed for pulsed applications with low duty cycles such as IFF, DME and TACAN. Internal impedance matching is utilized for maximum broadband performance and simplified external matching.



.250 SQ. 2LFL (M105)
 hermetically sealed

PIN CONNECTION



1. Collector 3. Emitter
 2. Base

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	45	V
V_{CES}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Device Current	1.0	A
P_{DISS}	Power Dissipation	21.9	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	8.0	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_C = 1mA$ $I_E = 0mA$	45	---	---	V
BV_{CEO}	$I_C = 5mA$ $I_B = 0V$	45	---	---	V
BV_{CES}	$I_C = 5mA$ $V_{BE} = 0V$	45	---	---	V
BV_{EBO}	$I_E = 1mA$ $I_C = 0mA$	3.5	---	---	V
I_{CES}	$V_{CE} = 28V$ $I_E = 0mA$	---	---	1.0	mA
HFE	$V_{CE} = 5V$ $I_C = 100mA$	10	---	200	---

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 1025 - 1150 \text{ MHz}$ $P_{IN} = 0.55W$ $V_{CC} = 28V$	5.0	---	---	W
G_P	$f = 1025 - 1150 \text{ MHz}$ $P_{IN} = 0.55W$ $V_{CC} = 28V$	9.5	---	---	dB
Condition	Pulse Width = 10 μs Duty Cycle = 1%				

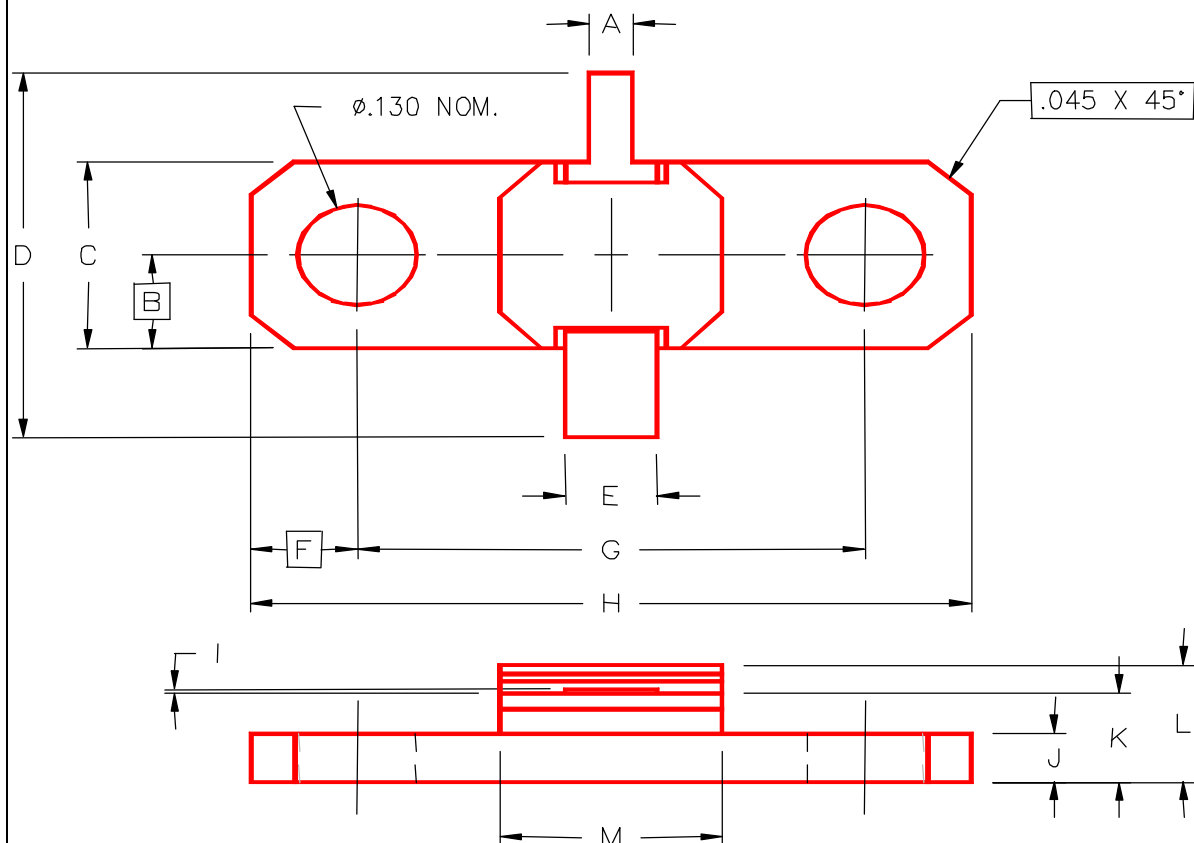
IMPEDANCE DATA

FREQ	$Z_{IN} (\Omega)$	$Z_{CL} (\Omega)$
1025 MHz	11.0+ j11.6	15 + j22
1090 MHz	12.5+ j12.0	19 + j19.5
1150 MHz	12.2+ j8.2	16.2 + j20.5

$V_{CC} = 28V$
 $P_{IN} = 0.5W$

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			