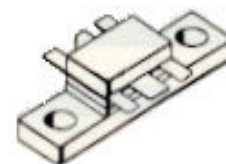


SD1496-03

RF & MICROWAVE TRANSISTORS 800 / 900 MHz APPLICATIONS

Features

- 960 MHz
- 24 VOLTS
- $P_{OUT} = 55$ WATTS
- $G_P = 7.4$ dB MINIMUM
- INPUT MATCHED
- COMMON BASE CONFIGURATION

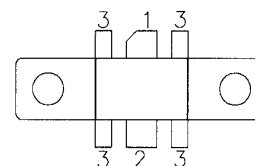


.230 6LFL (M142)
 epoxy sealed

DESCRIPTION:

The SD1496-03 is a 24V Class C epitaxial silicon NPN planar transistor designed primarily for amplifier applications in the 900 – 960 MHz frequency range. Internal input matching and common base configuration assure optimum gain and efficiency across the entire frequency band.

PIN CONNECTION



1. Collector 3. Base
 2. Emitter

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	26	V
V_{CES}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	9	A
P_{DISS}	Power Dissipation	190	W
T_{STG}	Storage Temperature	-65 to +150	°C
T_J	Junction Temperature	+200	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	0.9	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

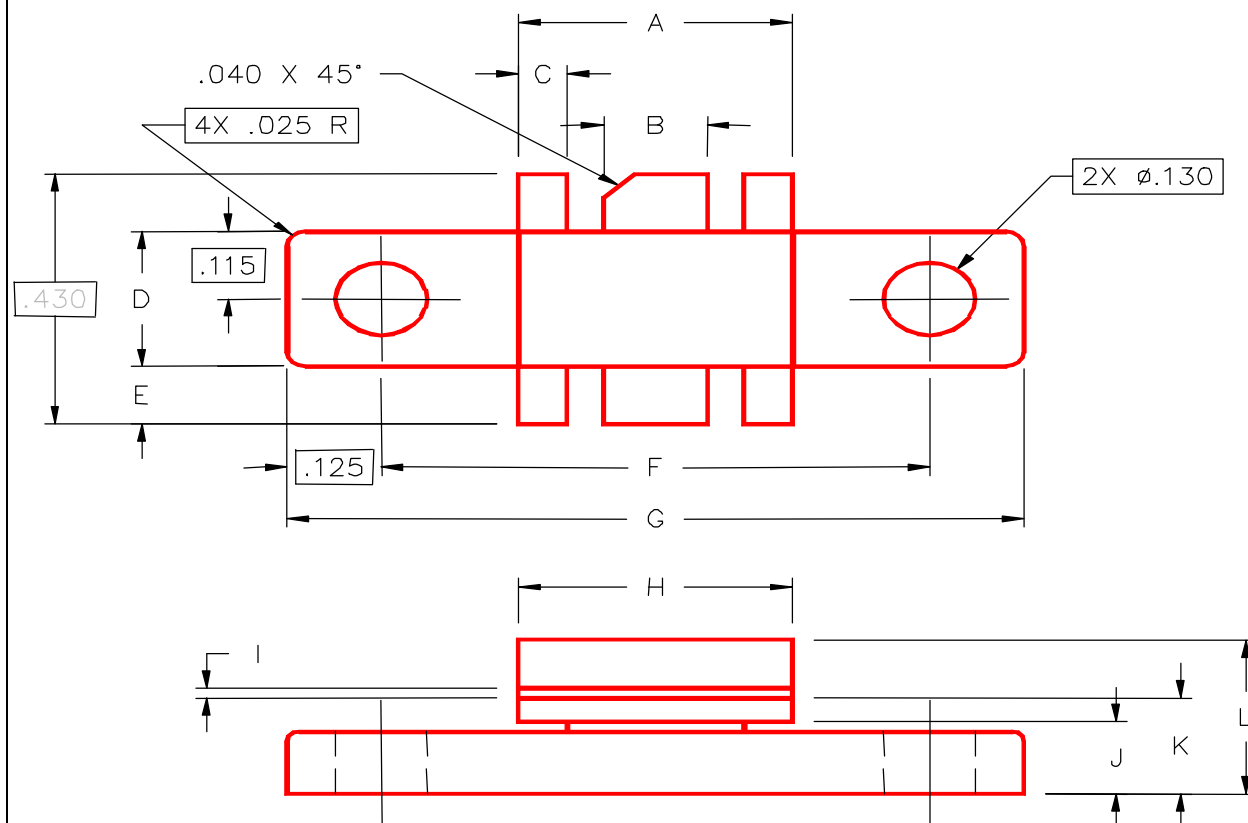
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 50 \text{ mA}$	$I_E = 0 \text{ mA}$	50	---	---	V
BV_{CES}	$I_C = 50 \text{ mA}$	$V_{BE} = 0 \text{ mA}$	50	---	---	V
BV_{CEO}	$I_C = 50 \text{ mA}$	$I_B = 0 \text{ mA}$	26	---	---	V
BV_{EBO}	$I_E = 10 \text{ mA}$	$I_C = 0 \text{ mA}$	3.0	---	---	V
I_{CES}	$V_{CE} = 20 \text{ V}$	$I_E = 0 \text{ mA}$	---	---	10	mA
I_{CBO}	$V_{CB} = 30 \text{ V}$	$I_E = 0 \text{ mA}$	---	---	5	mA
HFE	$V_{CE} = 5 \text{ V}$	$I_C = 1 \text{ A}$	20	---	100	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 960 \text{ MHz}$	$P_{IN} = 10 \text{ W}$	$V_{CE} = 24 \text{ V}$	60	---	---	dB
G_P	$f = 960 \text{ MHz}$	$P_{IN} = 10 \text{ W}$	$V_{CE} = 24 \text{ V}$	7.5	---	---	dB
η_C	$f = 960 \text{ MHz}$	$P_{IN} = 10 \text{ W}$	$V_{CE} = 24 \text{ V}$	50	---	---	%
C_{OB}	$f = 1 \text{ MHz}$	$V_{CB} = 24 \text{ V}$		---	---	70	pF

PACKAGE MECHANICAL DATA

PACKAGE STYLE M142



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.355/9,02	.365/9,27	I	.004/0,10	.006/0,15
B	.115/2,92	.125/3,18	J	.120/3,05	.130/3,30
C	.075/1,91	.085/2,16	K	.160/4,06	.180/4,57
D	.225/5,72	.235/5,97	L	.230/5,84	.260/6,60
E	.090/2,29	.110/2,79			
F	.720/18,29	.730/18,54			
G	.970/24,64	.980/24,89			
H	.355/9,02	.365/9,27			