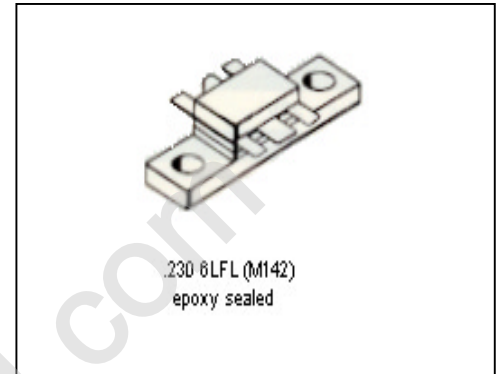
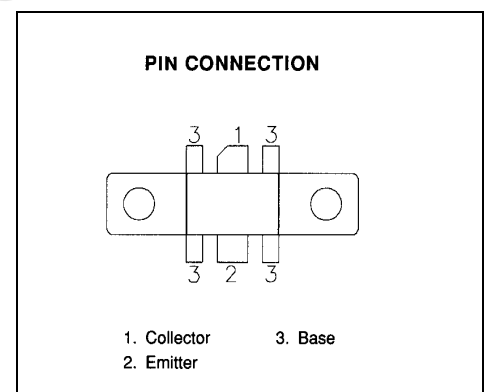


SD1496-03
**RF & MICROWAVE TRANSISTORS
800 / 900 MHz APPLICATIONS**
Features

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


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.


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 (T_{case} = 25°C)
STATIC

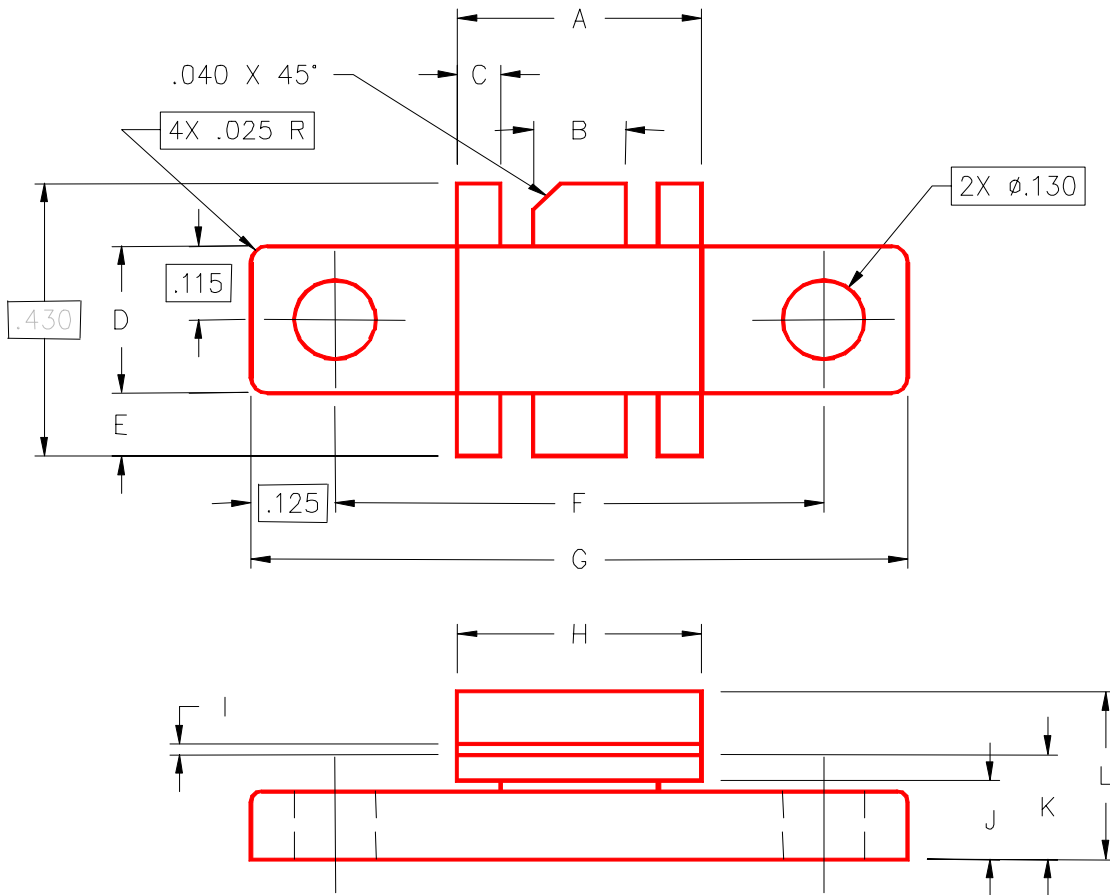
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
BV_{CBO}	I_C = 50 mA	I_E = 0 mA	50	---	---	V	
BV_{CES}	I_C = 50 mA	V_{BE} = 0 mA	50	---	---	V	
BV_{CEO}	I_C = 50 mA	I_B = 0 mA	26	---	---	V	
BV_{EBO}	I_E = 10 mA	I_C = 0 mA	3.0	---	---	V	
I_{CES}	V_{CE} = 20 V	I_E = 0 mA	---	---	10	mA	
I_{CBO}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

DYNAMIC

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