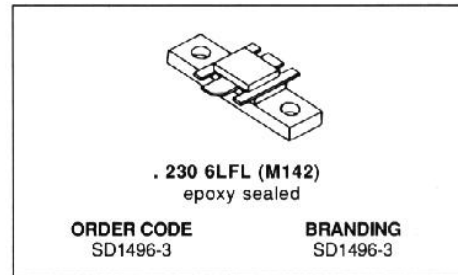


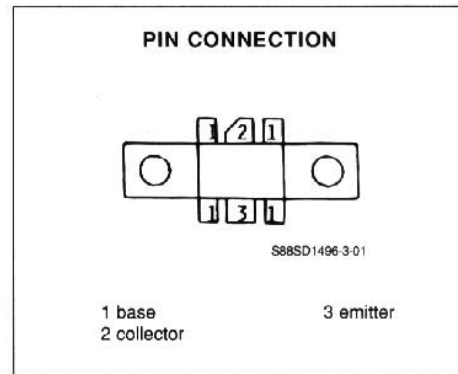
**RF & MICROWAVE TRANSISTORS**  
**900-960MHz CLASS C, BASE STATIONS**

- CLASS C TRANSISTOR
- FREQUENCY 960MHz
- VOLTAGE 24V
- POWER OUT 55W
- POWER GAIN 7.4dB
- EFFICIENCY 50%
- COMMON BASE



**DESCRIPTION**

The SD1496-3 is a 24V epitaxial silicon NPN planar transistor designed primarily for amplifier applications in the 900-960MHz frequency range. In the 900-960MHz frequency range. Internal input matching and common base configuration assure optimum gain and efficiency across the entire frequency band.



**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector - Base Voltage	50	V
V <sub>CEO</sub>	Collector - Emitter Voltage	26	V
V <sub>CES</sub>	Collector - Emitter Voltage	50	V
V <sub>EBO</sub>	Emitter - Base Voltage	4	V
I <sub>C</sub>	Collector Current	9	A
P <sub>tot</sub>	Total Power Dissipation	190	W
T <sub>stg</sub>	Storage Temperature	- 65 to 150	°C
T <sub>J</sub>	Junction Temperature	200	°C

**THERMAL DATA**

R <sub>th(j-c)</sub>	Junction-case Thermal Resistance	0.9	°C/W
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**SD1496-3****ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25^{\circ}C$ )

## STATIC

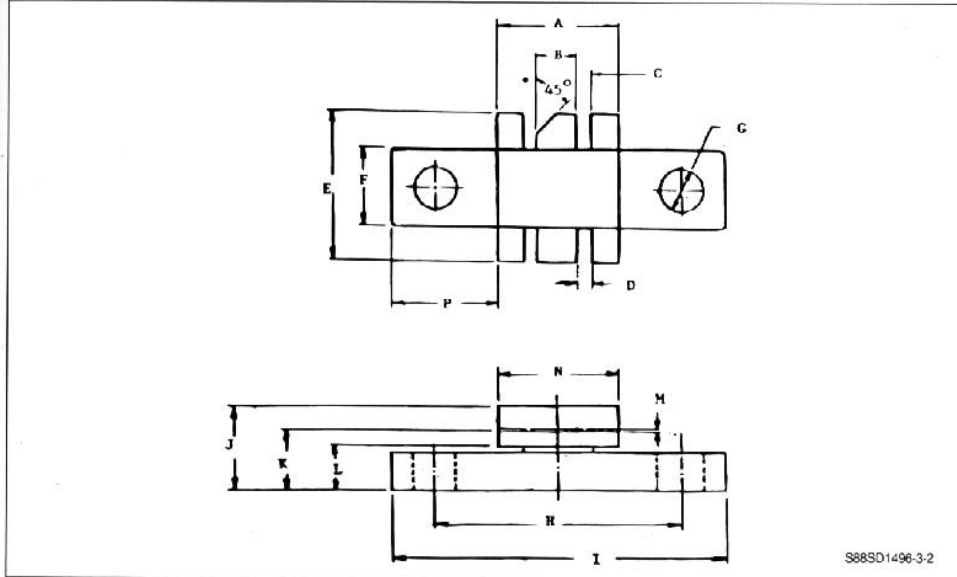
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
$BV_{CES}$	$I_C = 50mA$ $V_{BE} = 0$	50			V
$BV_{CFO}$	$I_F = 50mA$ $I_B = 0$	26			V
$BV_{EBO}$	$I_E = 10mA$ $I_C = 0$	3			V
$I_{CBO}$	$V_{CB} = 30V$ $I_E = 0$			5	mA
$h_{FE}$	$V_{CE} = 5V$ $I_C = 1A$	20			

## DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
$P_O$	$f = 960MHz$ $V_{CE} = 24V$	55			W
$G_P$	$f = 960MHz$ $V_{CE} = 24V$	7.4			dB
$\eta_C$	$f = 960MHz$ $V_{CC} = 24V$		50		%

## PACKAGE MECHANICAL DATA

.230 6LFL



	Minimum Inch/mm	Maximum Inch/mm
A	.355/9.01	.365/9.27
B	.115/2.92	.125/3.18
C	.075/1.91	.085/2.16
D	.035/0.89	.045/1.14
E	.425/10.80	.435/11.05
F	.225/5.72	.235/5.97
G	.115/2.92	.130/3.30
H	.720/18.29	.730/18.54

	Minimum Inch/mm	Maximum Inch/mm
I	.970/24.64	.980/24.89
J	.230/5.84	.260/6.60
K	.155/3.94	.175/4.45w
L	.120/3.05	.130/3.30
M	.004/0.10	.006/0.15
N	.345/8.76	.360/9.14
P	.300/7.62	.314/7.98