

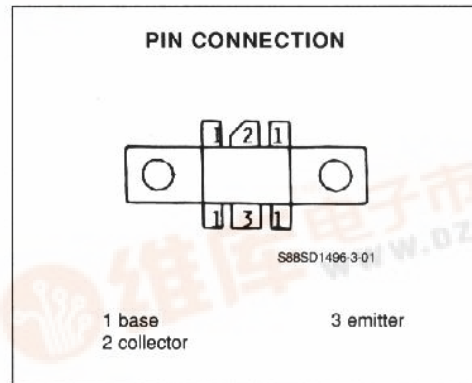
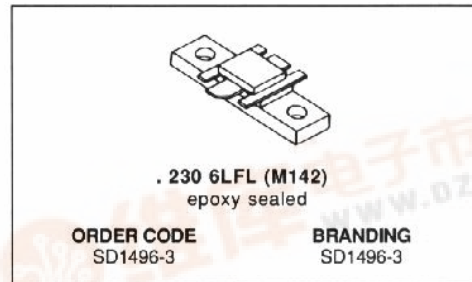
**Microsemi**  
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**SD1496-3**

**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** ( $T_{case} = 25^{\circ}C$ )

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	V
$I_C$	Collector Current	9	A
$P_{tot}$	Total Power Dissipation	190	W
$T_{stg}$	Storage Temperature	- 65 to 150	$^{\circ}C$
$T_j$	Junction Temperature	200	$^{\circ}C$

**THERMAL DATA**

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

## STATIC

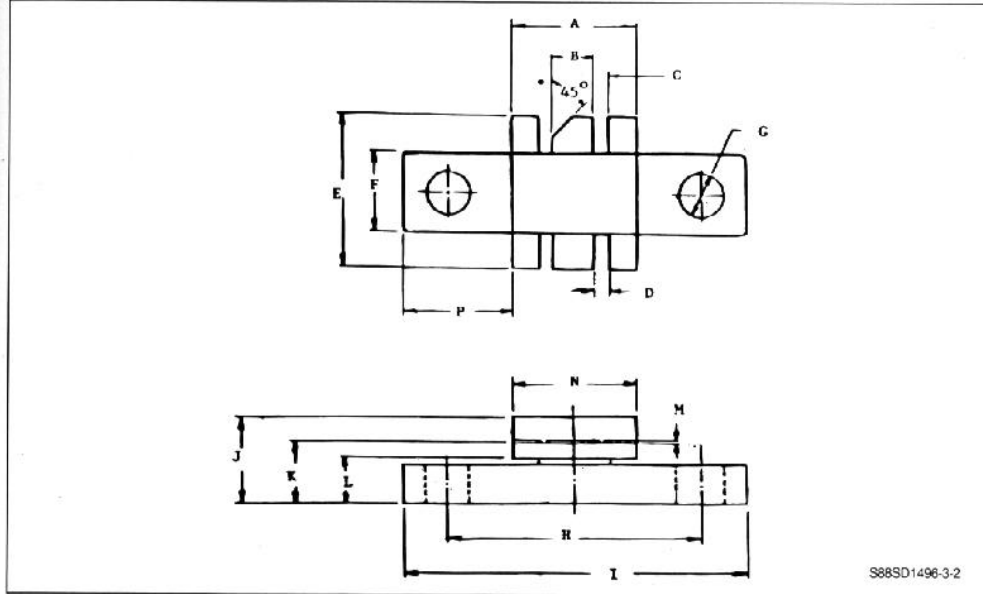
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{\text{CES}}$	$I_{\text{C}} = 50\text{mA}$	$V_{\text{BE}} = 0$	50			V
$BV_{\text{CEO}}$	$I_{\text{E}} = 50\text{mA}$	$I_{\text{B}} = 0$	26			V
$BV_{\text{EBO}}$	$I_{\text{E}} = 10\text{mA}$	$I_{\text{C}} = 0$	3			V
$I_{\text{CBO}}$	$V_{\text{CB}} = 30\text{V}$	$I_{\text{E}} = 0$			5	mA
$h_{\text{FE}}$	$V_{\text{CE}} = 5\text{V}$	$I_{\text{C}} = 1\text{A}$	20			

## DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$P_{\text{O}}$	$f = 960\text{MHz}$	$V_{\text{CE}} = 24\text{V}$	55			W
$G_{\text{P}}$	$f = 960\text{MHz}$	$V_{\text{CE}} = 24\text{V}$	7.4			dB
$\eta_{\text{C}}$	$f = 960\text{MHz}$	$V_{\text{CC}} = 24\text{V}$		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