

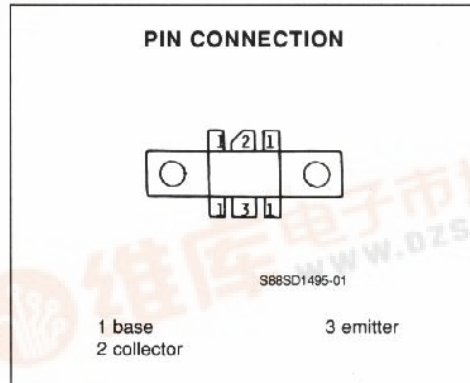
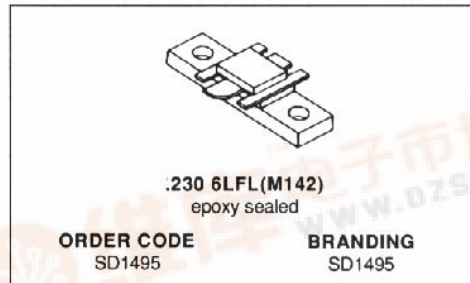
Microsemi RF Products
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SD1495

**RF & MICROWAVE TRANSISTORS
850-890MHz CLASS C, BASE STATIONS**

- CLASS C TRANSISTOR
- FREQUENCY 870MHz
- VOLTAGE 24V
- POWER OUT 35.0W
- POWER GAIN 7.3dB
- EFFICIENCY 45%
- COMMON BASE



DESCRIPTION

The SD1495 is a 24V epitaxial silicon planar transistor designed for base station applications in cellular telephone systems. The SD1495 uses matched input technology tuned Q to increase band width and power gain over the 850 to 890MHz.

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	50	V
V_{CEO}	Collector - Emitter Voltage	30	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	100	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	1.5	$^{\circ}C/W$
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March 1989

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SD1495

ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ }^{\circ}\text{C}$)

STATIC

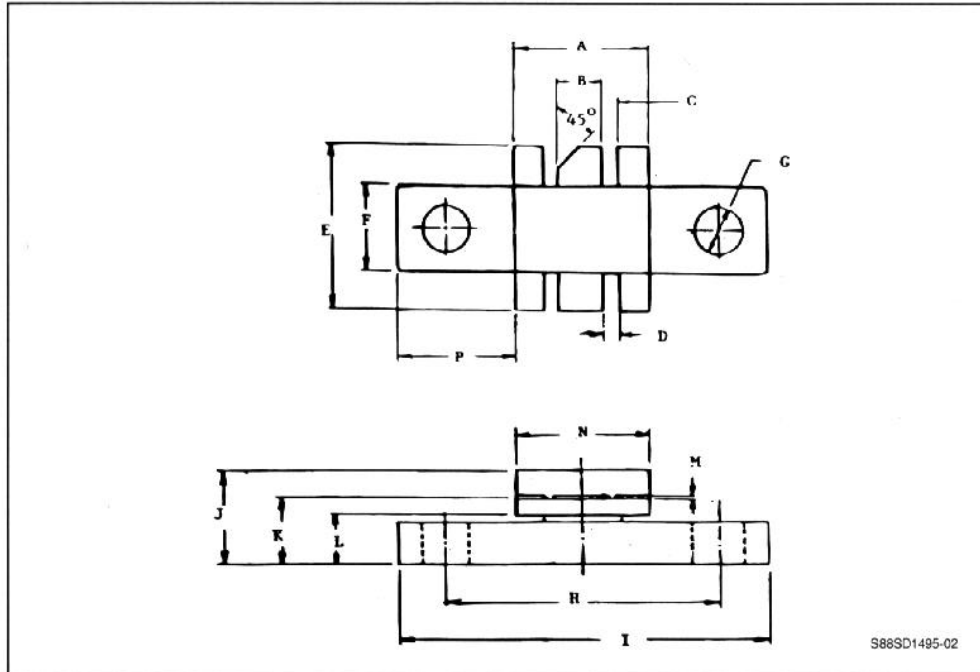
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	$I_C = 50\text{mA}$	$V_{BE} = 0$	50			V
BV_{CEO}	$I_C = 50\text{mA}$	$I_B = 0$	30			V
BV_{EBO}	$I_E = 10\text{mA}$	$I_C = 0$	4			V
I_{CBO}	$V_{CB} = 15\text{V}$	$I_E = 0$			5	mA
h_{FE}	$V_{CE} = 5\text{V}$	$I_C = 1\text{A}$	10			

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_O	$f = 850\text{MHz}$	$V_{CE} = 24\text{V}$	$P_{IN} = 6.5\text{W}$	35			W
	$f = 870\text{MHz}$	$V_{CE} = 24\text{V}$	$P_{IN} = 6.5\text{W}$	35			W
	$f = 890\text{MHz}$	$V_{CE} = 24\text{V}$	$P_{IN} = 6.5\text{W}$	32			W
G_P	$f = 870\text{MHz}$	$V_{CE} = 24\text{V}$	$P_{IN} = 6.5\text{W}$	7.3			dB
η_C	$f = 890\text{MHz}$	$V_{CC} = 24\text{V}$	$P_{OUT} = 32\text{W}$	45			%
C_{ob}	$f = 1\text{MHz}$	$V_{CB} = 25\text{V}$			50		pF

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