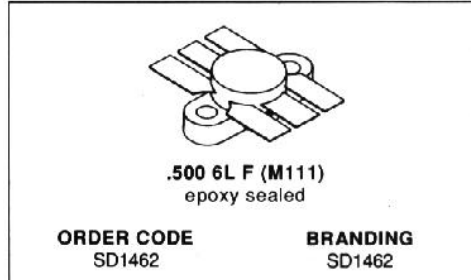


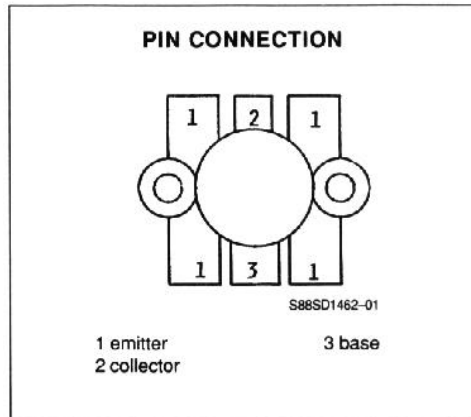
**RF & MICROWAVE TRANSISTORS  
WIDEBAND VHF-UHF CLASS C**

- CLASS C TRANSISTOR
- FREQUENCY 400MHz
- VOLTAGE 28V
- POWER OUT 70W
- POLWER GAIN 9.0dB
- EFFICIENCY 60%
- COMMON EMITTER
- GOLD METALLIZATION



**DESCRIPTION**

The SD1462 is a 28.0V epitaxial silicon NPN planar transistor designed primarily for UHF communications. This device utilizes diffused emitter resistors to achieve VSWR of 10:1 under operating conditions, and is internally input matched to optimize power gain and efficiency over the band.



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

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector - Base Voltage	60	V
V <sub>CEO</sub>	Collector - Emitter Voltage	33	V
V <sub>EBO</sub>	Emitter - Base Voltage	4	V
I <sub>C</sub>	Collector Current	8	A
P <sub>tot</sub>	Total Power Dissipation	220	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	0.8	°C/W
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**SD1462****ELECTRICAL CHARACTERISTICS** ( $T_{\text{case}} = 25^{\circ}\text{C}$ )

## STATIC

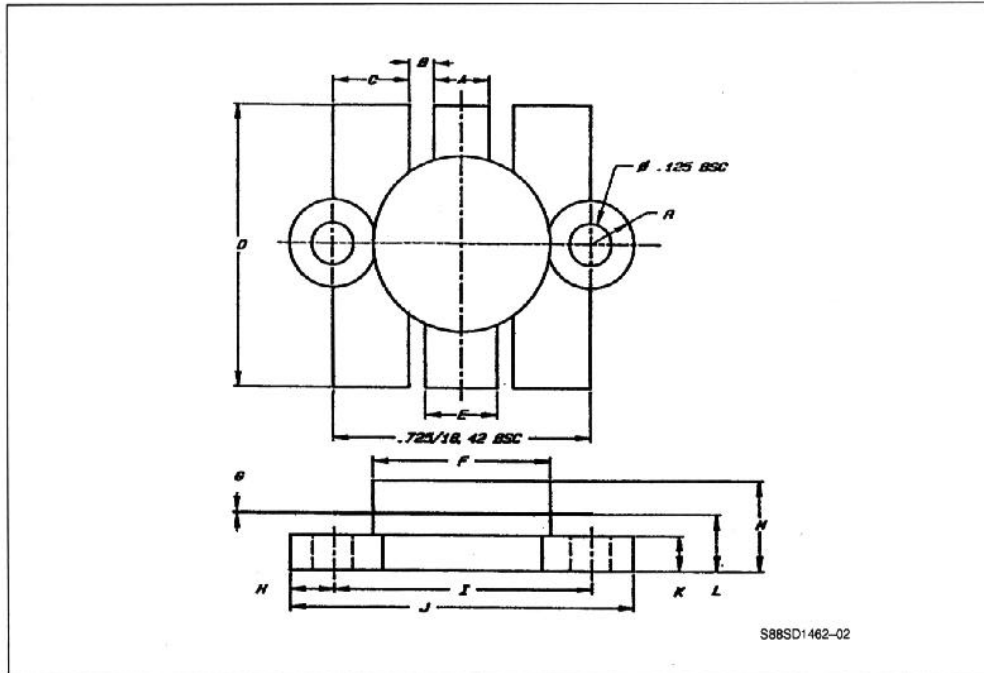
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{\text{CBO}}$	$I_{\text{C}} = 50\text{mA}$	$I_{\text{E}} = 0$	60			V
$BV_{\text{CEO}}$	$I_{\text{C}} = 50\text{mA}$	$I_{\text{C}} = 0$	33			V
$BV_{\text{EBO}}$	$I_{\text{E}} = 10\text{mA}$	$I_{\text{C}} = 0$	4			V
$I_{\text{CBO}}$	$V_{\text{CB}} = 30\text{V}$	$I_{\text{E}} = 0$			5	mA
$\eta_{\text{FE}}$	$V_{\text{CE}} = 5\text{V}$	$I_{\text{C}} = 1\text{A}$	20		120	

## DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$P_{\text{D}}$	$f = 400\text{MHz}$	$V_{\text{CE}} = 28\text{V}$	70			W
$G_{\text{P}}$	$f = 400\text{MHz}$	$V_{\text{CE}} = 28\text{V}$	9			dB
$\eta_{\text{c}}$	$f = 400\text{MHz}$	$V_{\text{CC}} = 28\text{V}$		60		%
$C_{\text{OB}}$	$f = 1\text{MHz}$	$V_{\text{CB}} = 30\text{V}$		65		pF

## PACKAGE MECHANICAL DATA

.500 6LFL



	Minimum Inches/mm	Maximum Inches/mm
A	.150/3.43	.160/4.06
B	.045/1.14 BSC	
C	.210/5.33	.220/5.59
D	.835/21.21	.865/21.97
E	.200/5.08	.210/5.33
F	.490/12.45	.510/12.95
G	.002/0.05	.007/0.18

	Minimum Inches/mm	Maximum Inches/mm
H	.125/3.18 BSC	
I	.720/18.29	.730/18.54
J	.970/24.64	.980/24.89
K	.095/2.41	.105/2.67
L	.150/3.81	.170/4.32
M		.280/7.11