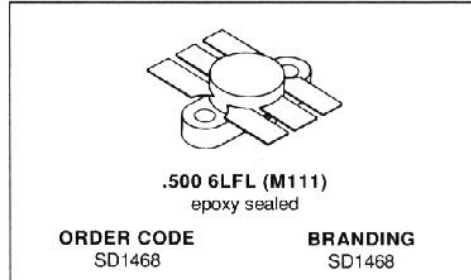


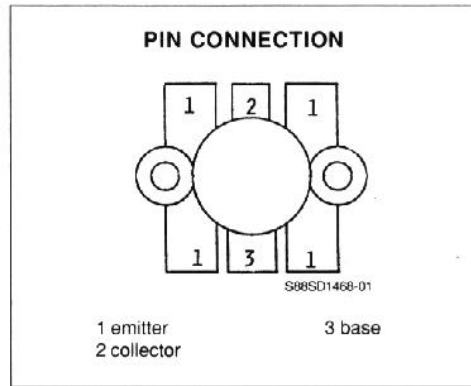
**RF AND MICROWAVE TRANSISTORS  
WIDE BAND UHF-VHF CLASS C**

- CLASS C TRANSISTOR
- FREQUENCY 400MHz
- VOLTAGE 28V
- POWER OUT 70W
- POWER GAIN 8.4dB
- INPUT MATCHED
- GOLD METALLIZATION
- COMMON EMITTER



**DESCRIPTION**

The SD1468 is a 28V gold metallized, epitaxial silicon NPN planar transistor designed for UHF military and commercial equipment. The SD1468 is an internally matched, broadband device optimized for operation within the 200-500MHz frequency range. This device utilizes diffused emitter resistors to achieve a VSWR of 20:1 at rated operating conditions.



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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector - Base Voltage	60.0	V
$V_{CEO}$	Collector - Emitter Voltage	30.0	V
$V_{CES}$	Collector - Emitter Voltage	60.0	V
$V_{EBO}$	Emitter - Base Voltage	4.0	V
$I_C$	Collector Current	8.0	A
$P_{tot}$	Total Power Dissipation	140.0	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	1.25	$^{\circ}C/W$
---------------	----------------------------------	------	---------------

**SD1468**

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

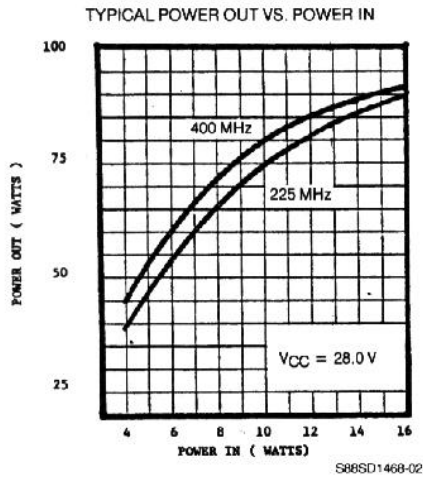
**STATIC**

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{CES}$	$I_C = 50mA$	$V_{BE} = 0$	60.0			V
$BV_{CEO}$	$I_C = 50mA$	$I_B = 0$	30.0			V
$BV_{EBO}$	$I_E = 5mA$	$I_C = 0$	4.0			V
$I_{CES}$	$V_{CE} = 30V$	$V_{BE} = 0$			5.0	mA
$h_{FE}$	$V_{CE} = 5.0V$	$I_C = 2A$	10.0		80.0	

**DYNAMIC**

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$P_O$	$f = 400MHz$	$V_{CE} = 28V$	70.0			W
$G_P$	$f = 400MHz$	$V_{CE} = 28V$	8.4			dB
$C_{OB}$	$f = 1MHz$	$V_{CB} = 28V$		65.0	80.0	pF

**APPLICATION INFORMATION** (typical curves)



**IMPEDANCE DATA**

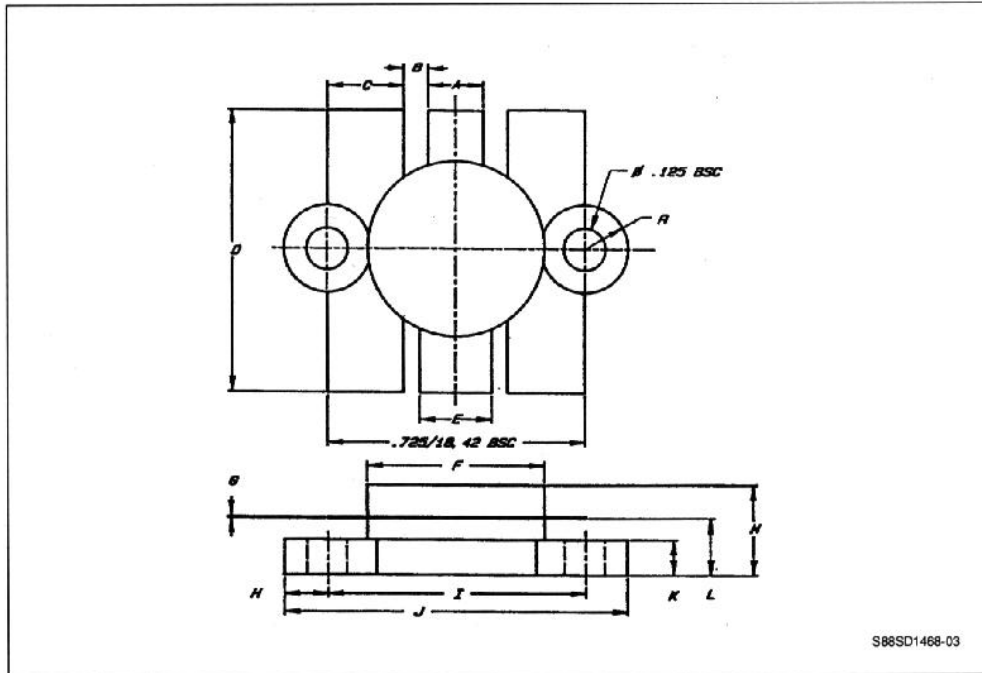
	<b>F = 225MHz</b>	<b>F = 400MHz</b>
$Z_S$	$1.44 - j0.87\Omega$	$1.29 + j0.87\Omega$
$Z_{CL}$	$1.70 - j2.6\Omega$	$3.0 + j0.87\Omega$

$V_{CE} = 28$

$P_O = 70W$

## 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	