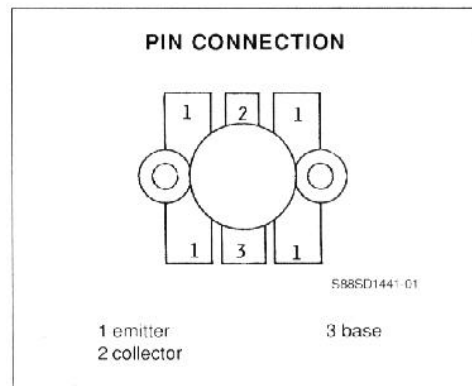
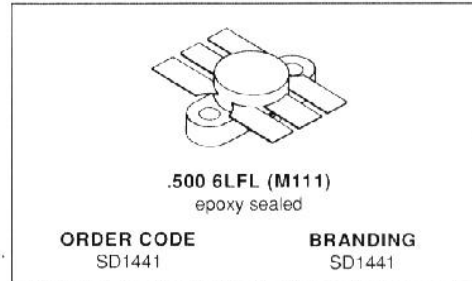


RF & MICROWAVE TRANSISTORS
130...230MHz FM MOBILE APPLICATIONS

- FM CLASS C TRANSISTOR
- FREQUENCY 175MHz
- VOLTAGE 12.5V
- POWER OUT 150W
- POWER GAIN 5.0dB
- COMMON EMITTER



DESCRIPTION

The SD1441 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for VHF communications. This device utilizes improved metallization systems to achieve extreme ruggedness under severe operating conditions.

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	36.0	V
V_{CEO}	Collector - Emitter Voltage	18.0	V
V_{CES}	Collector - Emitter Voltage	36.0	V
V_{EB0}	Emitter - Base Voltage	4.0	V
I_C	Collector Current	22.0	A
P_{tot}	Total Power Dissipation	350.0	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	0.5	$^{\circ}C/W$
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SD1441

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

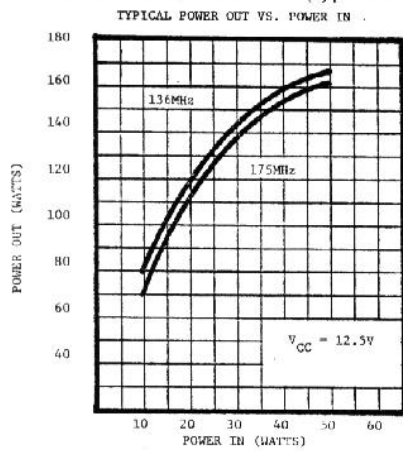
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CES}	$I_C = 100mA$ $V_{RF} = 0$	36.0			V
BV_{CEO}	$I_C = 100mA$ $I_B = 0$	18.0			V
BV_{EBO}	$I_E = 5mA$ $I_C = 0$	4.0			V
I_{CBQ}	$V_{CB} = 15.0V$ $I_E = 0$			5.0	mA
h_{FE}	$V_{CE} = 5.0V$ $I_C = 5A$	10.0			

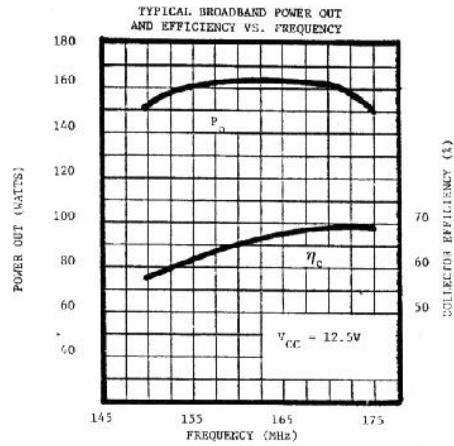
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_O	$f = 175MHz$ $V_{CE} = 12.5V$	150.0	5.0		W
G_P	$f = 175MHz$ $V_{CE} = 12.5V$	5.0	5.5		dB
C_{OB}	$f = 1MHz$ $V_{CB} = 12.5V$ $I_E = 0$		430.0		pF

APPLICATION INFORMATION (typical curves)



S88SD1441-02



S88SD1441-03

IMPEDANCE DATA (typical values)

$$Z_s = .7 - j1.0\Omega$$

$$Z_{cl} = .7 - j0.6\Omega$$

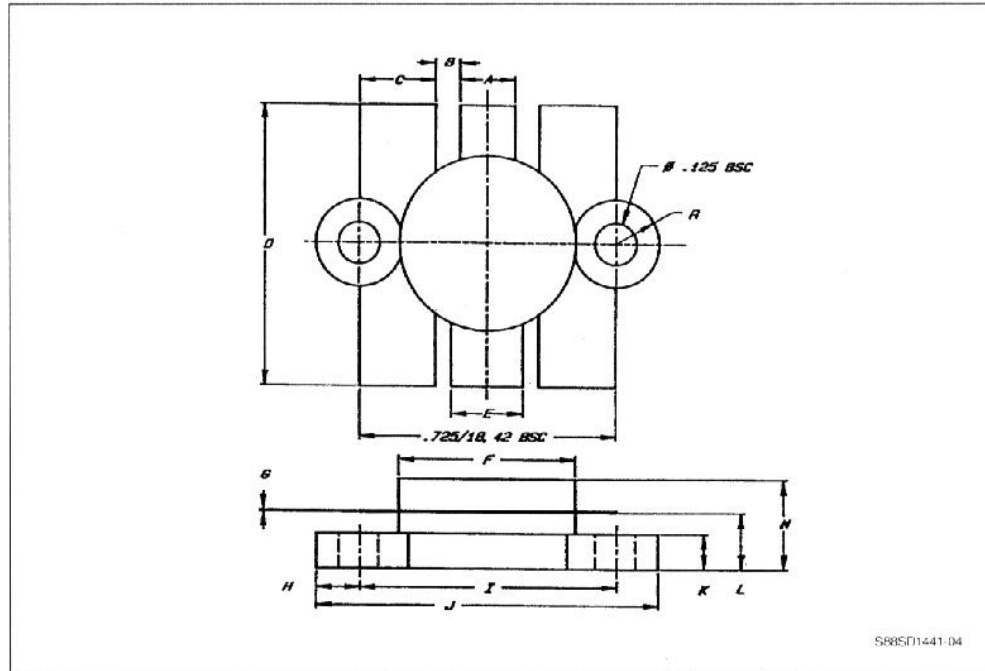
$$V_{CE} = 12.5V$$

$$P_O = 150W$$

$$F = 175MHz$$

PACKAGE MECHANICAL DATA

.500 6LFL



S88SD1441-04

	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