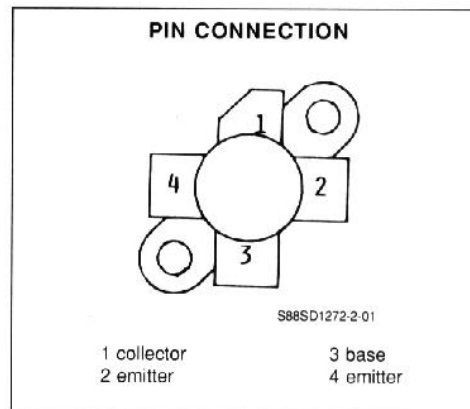
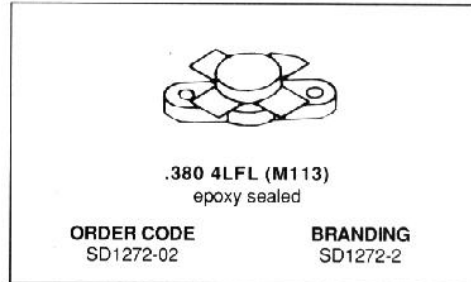


**RF & MICROWAVE TRANSISTORS**  
130... 230MHz FM MOBILE APPLICATIONS

- FM CLASS C TRANSISTOR
- FREQUENCY 175MHz
- VOLTAGE 12.5V
- POWER OUT 25W
- POWER GAIN 9.2dB
- COMMON EMITTER



**DESCRIPTION**

The SD1272-2 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for VHF communications. This device utilizes a nichrome aluminium metallization system to withstand very high VSWR 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
$V_{EBO}$	Emitter - Base Voltage	4.0	V
$I_C$	Collector Current	4.0	A
$P_{Tot}$	Total Power Dissipation	65.0	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	3.5	$^{\circ}C/W$
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**SD1272-2**

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

STATIC

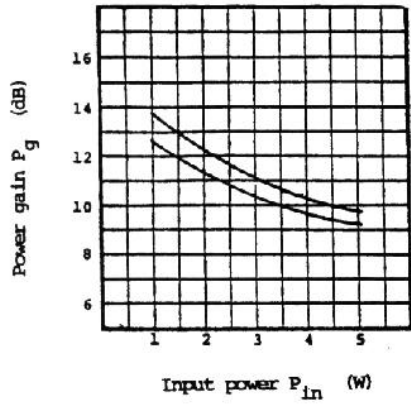
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{CBO}$	$I_C = 20mA$	$I_E = 0$	36.0			V
$BV_{CEO}$	$I_C = 50mA$	$I_B = 0$	18.0			V
$BV_{EBO}$	$I_E = 5mA$	$I_C = 0$	4.0			V
$I_{CBO}$	$V_{CB} = 15.0V$	$I_E = 0$			5.0	mA
$h_{FE}$	$V_{CE} = 5.0V$	$I_C = 250mA$	20.0			

DYNAMIC

Symbol	Test Conditions				Value			Unit
					Min.	Typ.	Max.	
$P_O$	$f = 175MHz$	$V_{CE} = 12.5V$			25.0			W
$G_P$	$f = 175MHz$	$V_{CE} = 12.5V$			9.2			dB
$C_{OB}$	$f = 1MHz$	$V_{CB} = 15.0V$	$I_E = 0$			130.0		pF

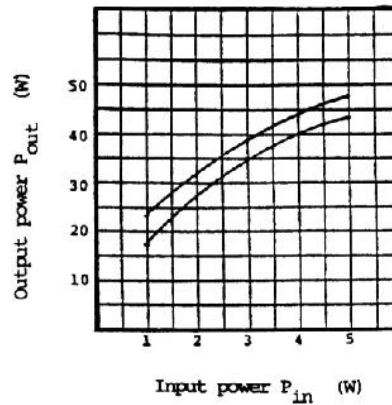
**APPLICATION INFORMATION** (typical curves)

POWER GAIN VS INPUT POWER

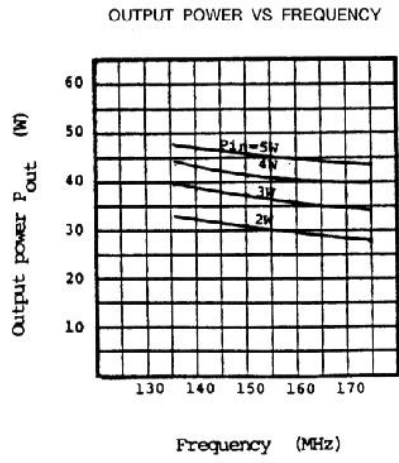


S88SD1272-1-02

OUTPUT POWER VS INPUT POWER



S88SD1272-2-03

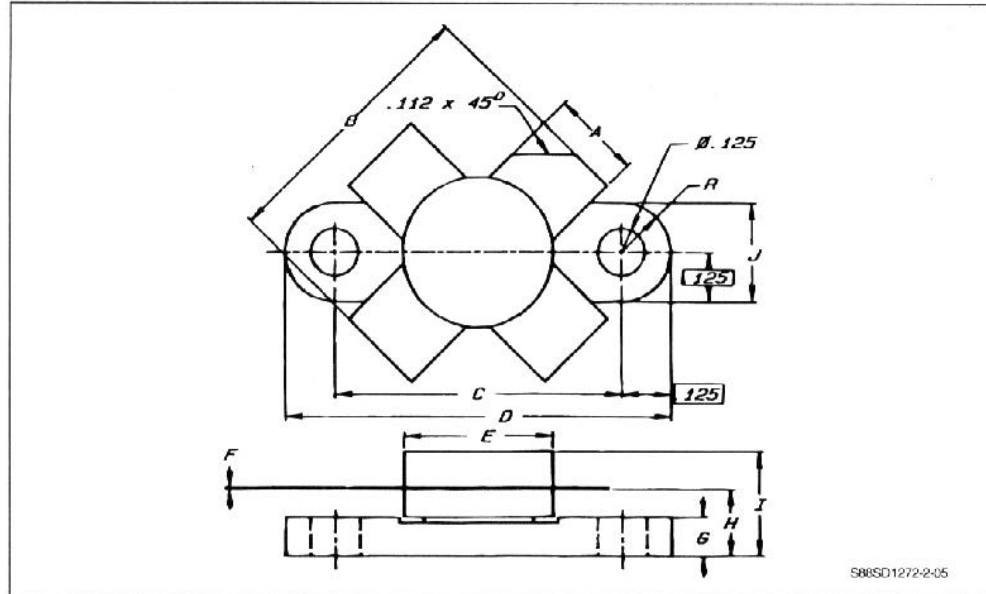


SRSD1272-3-04

**SD1272-2**

**PACKAGE MECHANICAL DATA**

.380 4LFL



S08SD1272-2-05

	Minimum Inches/mm	Maximum Inches/mm
A	.220/5.59	.230/5.84
B	.785/19.94	
C	.720/18.29	.730/18.54
D	.970/24.64	.980/24.89
E		.385/9.78
F	.004/0.10	.006/0.15
G	.085/2.16	.105/2.67
H	.160/4.06	.180/4.57
I		.280/7.11
J	.240/6.10	.255/6.48