

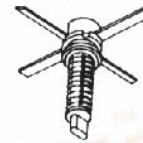
Microsemi
RF Products
Progress Powered by Technology

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SD1132-5

RF & MICROWAVE TRANSISTORS
450-512MHz CLASS C MOBILE APPLICATIONS

- CLASS C TRANSISTOR
- FREQUENCY 470MHz
- VOLTAGE 12.5V
- POWER OUT 0.6W
- POWER GAIN 13.0dB
- COMMON EMITTER

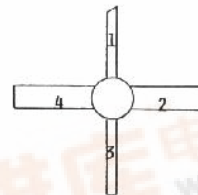


X0 72 (M108)
epoxy sealed

ORDER CODE
SD1132-05

BRANDING
1132-5

PIN CONNECTION



1 collector
2 emitter

3 base
4 emitter

DESCRIPTION

The SD1132-5 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for UHF predriver applications. This device uses nichrome aluminium metallization to achieve infinite VSWR at rated 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_{EBO}	Emitter - Base Voltage	4.0	V
I_C	Collector Current	0.7	A
P_{tot}	Total Power Dissipation	2.5	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	70.0	$^{\circ}C/W$
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March 1989

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181

SD1132-5

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

STATIC

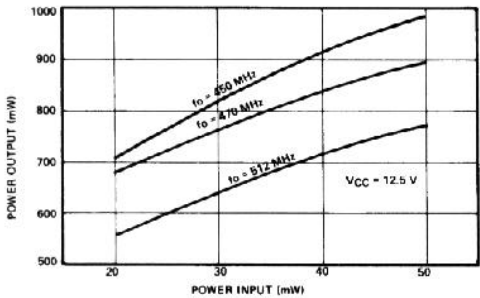
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	$I_C = 10mA$	$V_{BE} = 0$	36.0			V
BV_{CEO}	$I_C = 10mA$	$I_B = 0$	18.0			V
BV_{EBO}	$I_E = 5mA$	$I_C = 0$	4.0			V
I_{CBO}	$V_{CB} = 12.5V$	$I_E = 0$			1.0	mA
h_{FE}	$V_{CE} = 5.0V$	$I_C = 150A$	20.0			

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_O	$f = 470MHz$	$V_{CE} = 12.5V$	0.6			W
G_P	$f = 470MHz$	$V_{CE} = 12.5V$	13.0			dB
C_{OB}	$f = 1MHz$	$V_{CB} = 12.5V$			4.0	pF

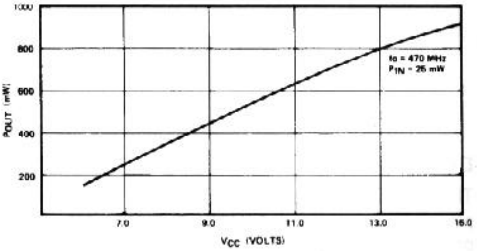
APPLICATION INFORMATION (typical curves)

POWER OUT vs POWER IN



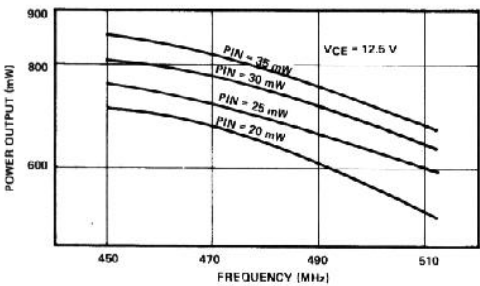
S88SD1132-5-02

POWER OUT vs VCC



S88SD1132-5-03

POWER OUT vs FREQUENCY



S88SD1132-5-04

IMPEDANCE DATA (typical)

$$Z_S = 1.5 + j0.55\Omega$$

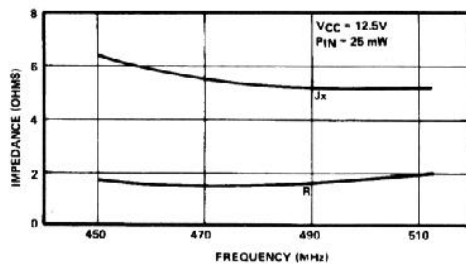
$$Z_{CL} = 14 + j.43\Omega$$

$$F = 470\text{MHz}$$

$$V_{CE} = 12.5\text{V}$$

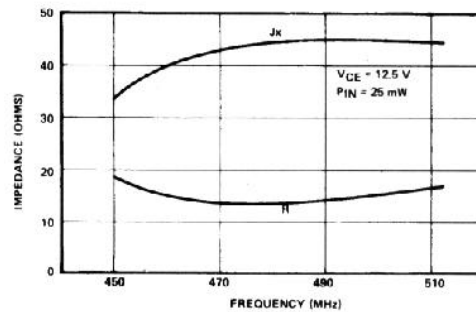
$$P_I = 0.025\text{W}$$

SOURCE IMPEDANCE vs FREQUENCY



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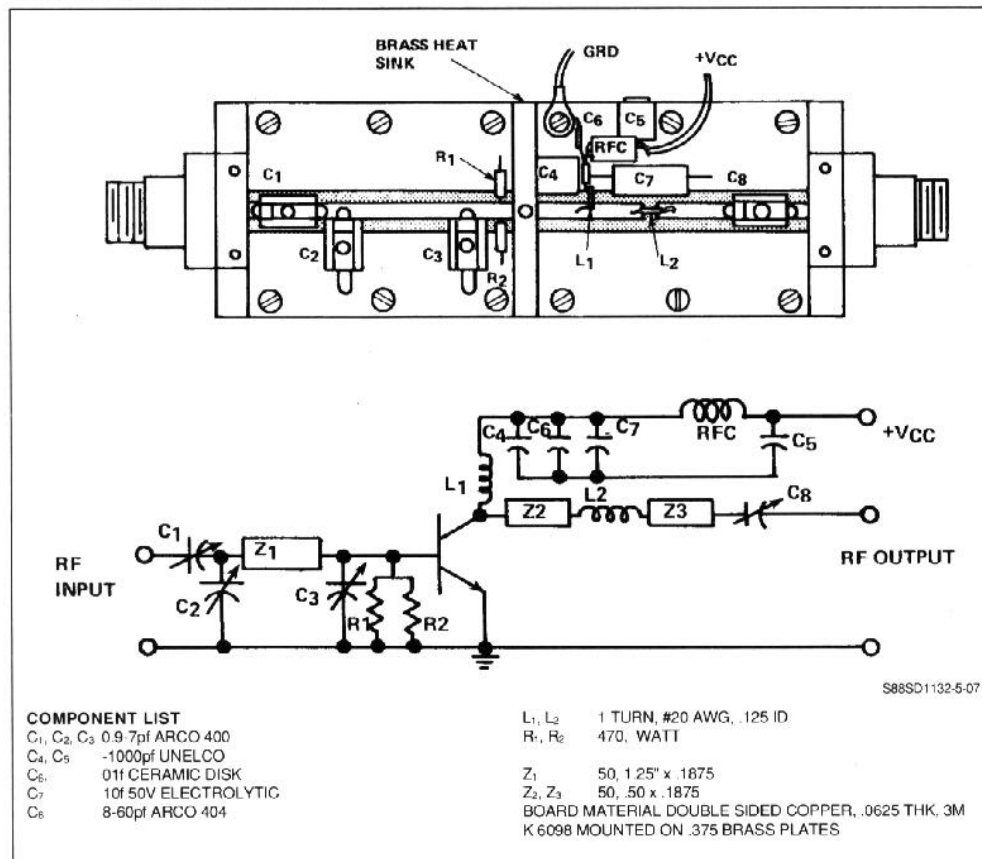
COLLECTOR LOAD IMPEDANCE vs FREQUENCY



S88SD1132-5-06

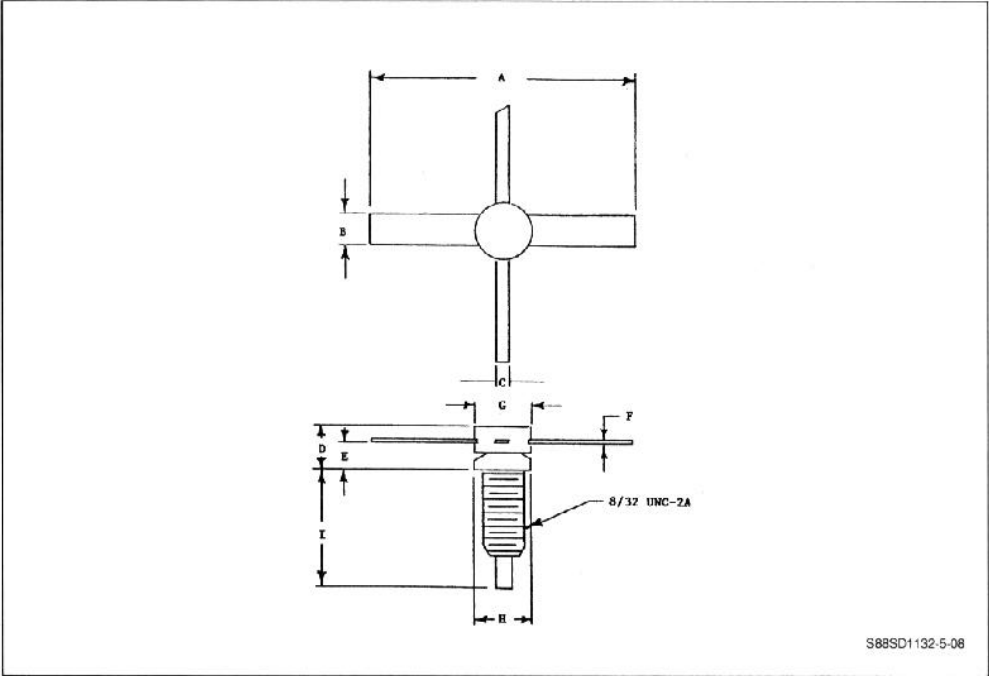
SD1132-5

TEST CIRCUIT (450-512MHz)



PACKAGE MECHANICAL DATA

X072



S88SD1132-5-08

	Minimum Inches	Maximum Inches
A	.890	
B	.120	.130
C	.027	.033
D		.195
E	.098	.112
F	.003	.007
G	.201	.207
H	.201	.207
I	.425	.465