

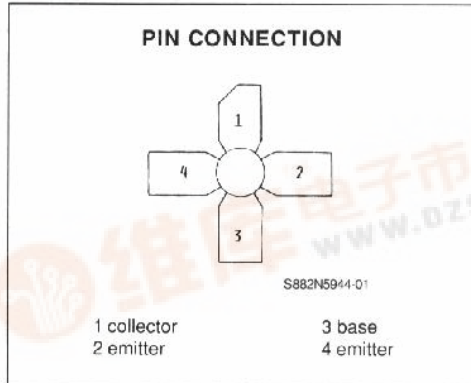
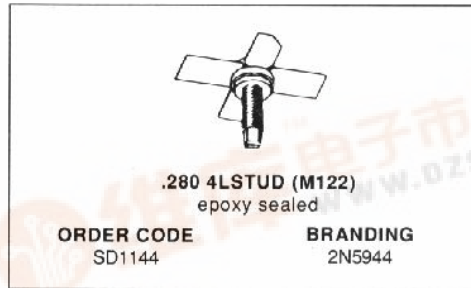


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2N5944

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

- CLASS C TRANSISTOR
- FREQUENCY 470MHz
- VOLTAGE 12.5V
- POWER OUT 2W
- POWER GAIN 9dB
- COLLECTOR EFFICIENCY 60%
- COMMON EMITTER



DESCRIPTION

The 2N5944 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for UHF communications. This device utilizes improved metallization to achieve infinite VSWR at rated operating conditions.

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

Symbol	Parameter	Value	Unit
V_{CBQ}	Collector - Base Voltage	36.0	V
V_{CEO}	Collector - Emitter Voltage	16.0	V
V_{CES}	Collector - Emitter Voltage	36	V
V_{EBO}	Emitter - Base Voltage	4.0	V
I_C	Collector Current	.4	A
P_{tot}	Total Power Dissipation	5.0	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	35	$^{\circ}C/W$
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March 1989

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2N5944

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

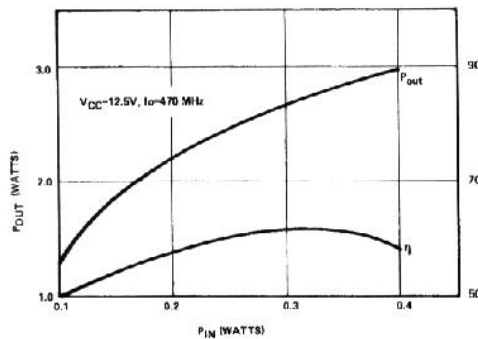
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CES}	$I_C = 50mA$ $V_{BE} = 0$	36			V
BV_{CEO}	$I_C = 50mA$ $I_B = 0$	16			V
BV_{EBO}	$I_E = 1mA$ $I_C = 0$	4			V
I_{CBO}	$V_{CB} = 15V$ $I_E = 0$			1	mA
h_{FE}	$V_{CE} = 5V$ $I_C = 0.1A$	20			

DYNAMIC

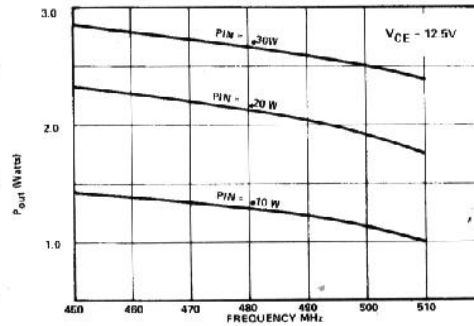
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_O	$f = 470MHz$ $V_{CE} = 12.5V$	2			W
G_P	$f = 470MHz$ $V_{CE} = 12.5V$	9			dB
C_{OB}	$f = ?MHz$ $V_{CB} = 12.5V$ $I_E = 0$			15	pF

APPLICATION INFORMATION (typical curves)



POWER OUTPUT VS POWER INPUT

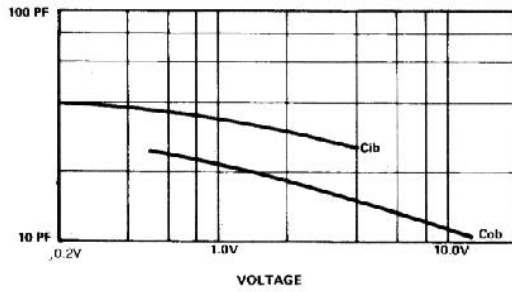
S88SD1144-02



POWER OUTPUT VS FREQUENCY

S88SD1144-03

APPLICATION INFORMATION (typical curves) (continued)



CAPACITANCE VS VOLTAGE

S98SD1144-04