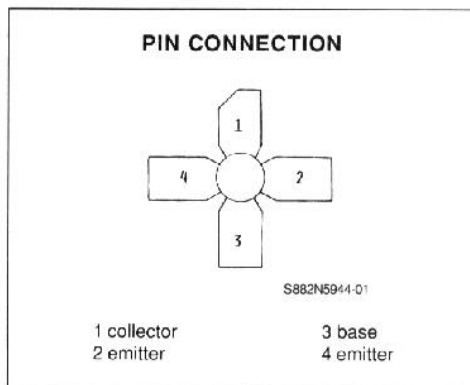
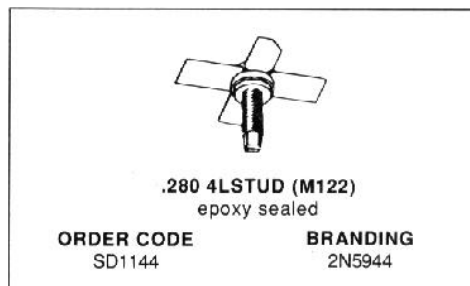


RF & MICROWAVE TRANSISTORS
450-512MHz CLASS C MOBILE APPLICATIONS

- 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_{CBO}	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	$^{\circ}C/W$
---------------	----------------------------------	----	---------------

2N5944

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

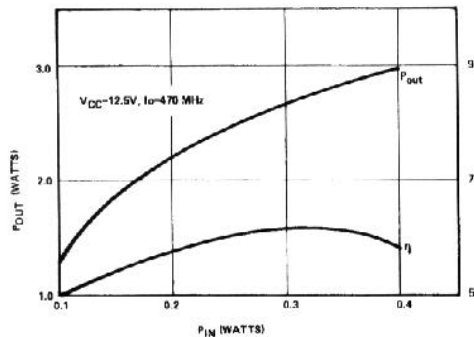
STATIC

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

DYNAMIC

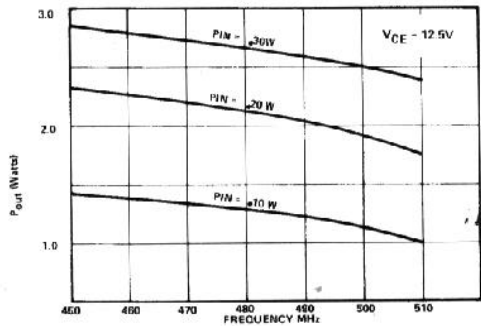
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_O	$f = 470\text{MHz}$	$V_{CE} = 12.5\text{V}$	2			W
G_P	$f = 470\text{MHz}$	$V_{CE} = 12.5\text{V}$	9			dB
C_{OB}	$f = ?\text{MHz}$	$V_{CB} = 12.5\text{V}$			15	pF

APPLICATION INFORMATION (typical curves)



POWER OUTPUT VS POWER INPUT

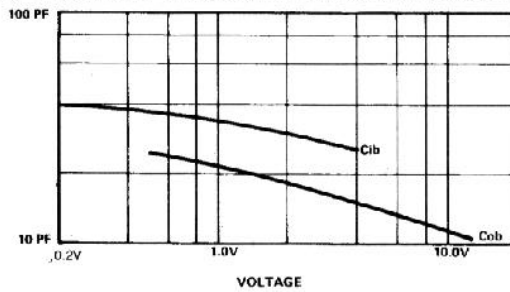
S88SD1144-02



POWER OUTPUT VS FREQUENCY

S88SD1144-03

APPLICATION INFORMATION (typical curves) (continued)



CAPACITANCE VS VOLTAGE

S88SD1144-04