RF Products
Microsemi
Progress Powered by Technology

140 Commerce Drive
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2N5944

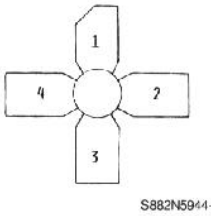
RF & MICROWAVE TRANSISTORS
450-512MHz CLASS C MOBILE APPLICATIONS

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

.280 4LSTUD (M122)
epoxy sealed

ORDER CODE	BRANDING
SD1144	2N5944

PIN CONNECTION



S882N5944-01

1 collector
2 emitter
3 base
4 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°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	°C
T_j	Junction Temperature	+ 200	°C

THERMAL DATA

$R_{th(j-c)}$	Junction-case Thermal Resistance	35	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C)

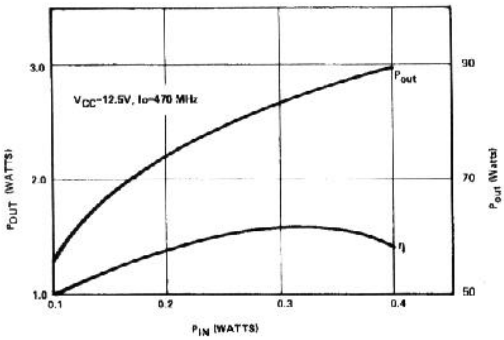
STATIC

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_F = 0			1	mA
h_{FE}	V_{CE} = 5V	I_C = 0.1A	20			

DYNAMIC

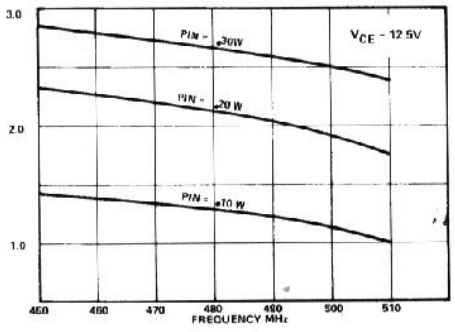
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_O	f = 470MHz	V_{CE} = 12.5V		2			W
G_P	f = 470MHz	V_{CE} = 12.5V		9			dB
C_{OB}	f = ?MHz	V_{CB} = 12.5V	I_E = 0			15	pF

APPLICATION INFORMATION (typical curves)



POWER OUTPUT VS POWER INPUT

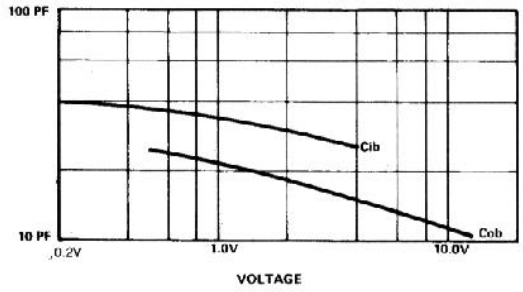
S88SD1144-02



POWER OUTPUT VS FREQUENCY

S88SD1144-03

APPLICATION INFORMATION (typical curves) (continued)



CAPACITANCE VS VOLTAGE

S88SD1144-04