

### DESCRIPTION

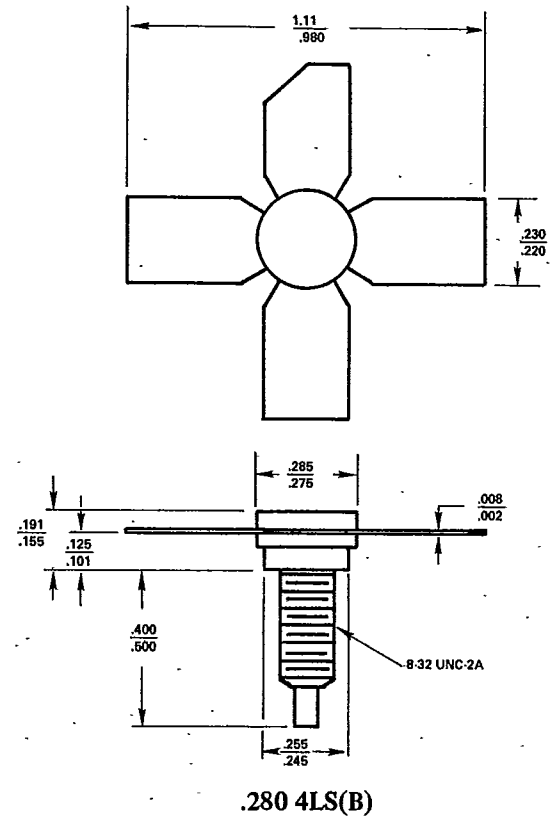
HG device type 2N5944 is a 12.5 volt epitaxial silicon NPN planar transistor designed primarily for UHF communications.

### FEATURES

- Designed for UHF military and commercial equipment
- 2.0 watts (min.) with greater than 9.0 dB gain
- Withstands infinite VSWR under operating conditions

### ABSOLUTE MAX. RATING

$V_{CBO}$	: Collector-Base Voltage	36.0 V
$V_{CEO}$	: Collector-Emitter Voltage	16.0 V
$V_{EBO}$	: Emitter-Base Voltage	4.0 V
$I_c$	: Collector Current (max.)	.4 A
PT.	: Total Device Dissipation @ 25° Case	5.0 W
$\theta_{jc}$	: Thermal Resistance	35°C/W
$T_j$	: Junction Temperature	+200°C
$T_s$	: Storage Temperature	-65°C to +200°C



### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage*	$BV_{CEO}$	$I_c = 50 \text{ mA}, I_b = 0$	16	—	—	V <sub>dc</sub>
Collector-Emitter Breakdown Voltage*	$BV_{CES}$	$I_c = 50 \text{ mA}, V_{be} = 0$	36	—	—	V <sub>dc</sub>
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_e = 1 \text{ mA}, I_c = 0$	4	—	—	V <sub>dc</sub>
Collector Cut Off Current	$I_{CBO}$	$V_{cb} = 15 \text{ V}, I_e = 0$	—	—	1	mA
DC Current Gain	$h_{FE}$	$V_{ce} = 5 \text{ V}, I_c = .1 \text{ A}$	20	—	—	—

\*Pulsed through 25 MH Inductor

### RF CHARACTERISTICS: SMALL SIGNAL

Output Capacitance – $F_o = 1.0 \text{ MHz}$	$C_{ob}$	$V_{cb} = 12.5 \text{ V}, I_c = 0$	—	—	15	pF
Input Capacitance – $F_o = 1.0 \text{ MHz}$	$C_{ib}$	$V_{eb} = .5 \text{ V}, I_c = 0$	—	40	—	pF

### RF CHARACTERISTICS: LARGE SIGNAL

Amplifier power out	$P_o$	470 MHz/12.5 V	2	—	—	watts
Amplifier power gain	$P_g$	470 MHz/12.5 V	9	—	—	dB
Impedance – Input	$Z_{in}$	470 MHz/12.5 V	2.24 + J.65		—	ohms
Impedance – Output	$Z_{out}$	470 MHz/12.5 V	13.0 – J8.65		—	ohms

Note : Above parameters , ratings , limits and conditions are subject to change.