

**Silicon PNP Power Transistor**

**2SB981**

**DESCRIPTION**

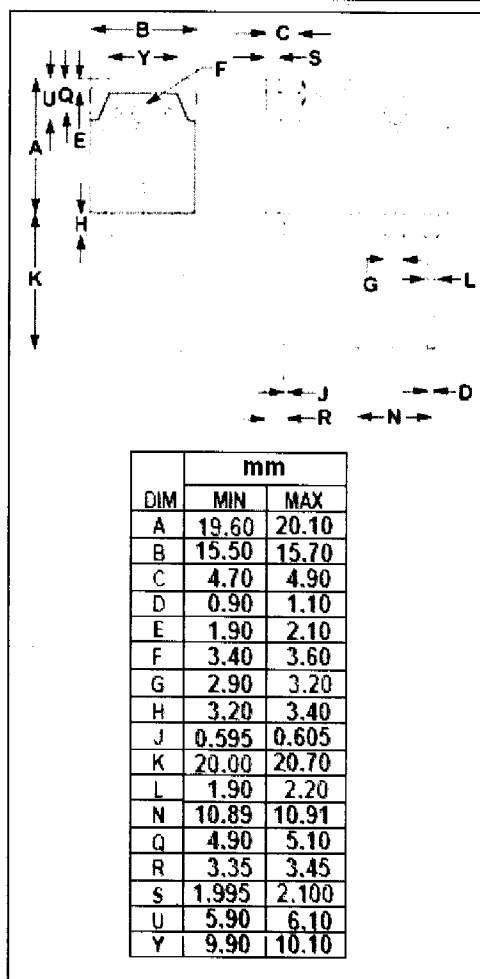
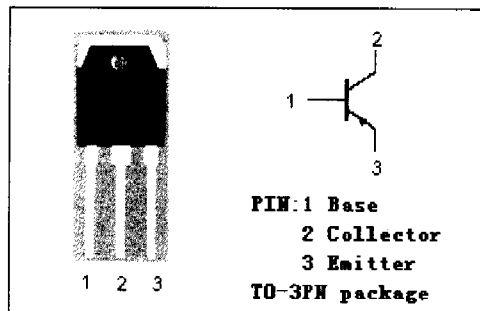
- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -140V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Wide Area of Safe Operation

**APPLICATIONS**

- Designed for high power amplifications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-140	V
$V_{CEO}$	Collector-Emitter Voltage	-140	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-7	A
$I_{CP}$	Collector Current-Pulse	-12	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	80	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



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### ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5A; I_B = -0.5A$			-2.0	V
$V_{BE(on)}$	Base -Emitter On Voltage	$I_C = -5A; V_{CE} = -5V$			-1.8	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -140V; I_E = 0$			-50	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -3V; I_C = 0$			-50	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -20mA; V_{CE} = -5V$	20			
$h_{FE-2}$	DC Current Gain	$I_C = -1A; V_{CE} = -5V$	60		200	
$h_{FE-3}$	DC Current Gain	$I_C = -5A; V_{CE} = -5V$	20			
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5A; V_{CE} = -5V; f = 1\text{MHz}$		200		MHz
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10V; f = 1\text{MHz}$		200		pF

#### ◆ $h_{FE-2}$ Classifications

Q	S	P
60-120	80-160	100-200