

**Silicon PNP Power Transistor**

**2SA814**

**DESCRIPTION**

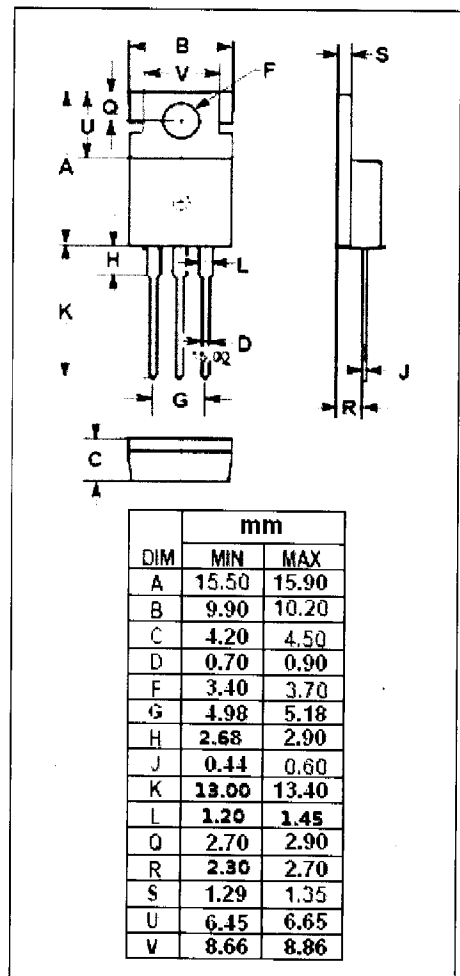
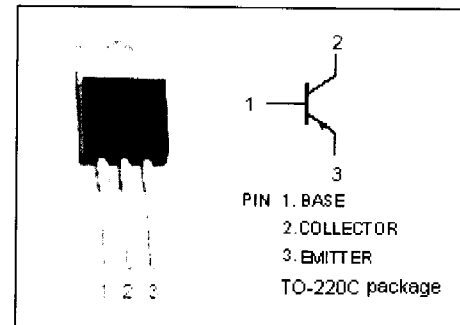
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120(V)(Min.)$
- Complement to Type 2SC1624

**APPLICATIONS**

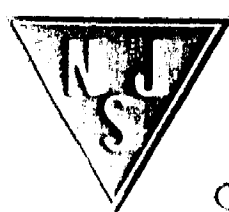
- Medium power amplifier applications.
- Driver stage amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1	A
$I_E$	Emitter Current-Continuous	1	A
$P_C$	Total Power Dissipation @ $T_C=25^{\circ}C$	15	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



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# 2SA814

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}; I_B = 0$	-120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}; I_C = 0$	-5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -0.5\text{A}; I_B = -50\text{mA}$			-0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$			-1.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -50\text{V}; I_E = 0$			-1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-1.0	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -0.15\text{A}; V_{CE} = -5\text{V}$	70		240	
$h_{FE-2}$	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$	40			
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.15\text{A}; V_{CE} = -5\text{V}$		30		MHz
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 1\text{MHz}$		30		pF

### ◆ $h_{FE-1}$ Classifications

O	Y
70-140	120-240