

# isc Silicon PNP Power Transistor

## 2SA1093

### DESCRIPTION

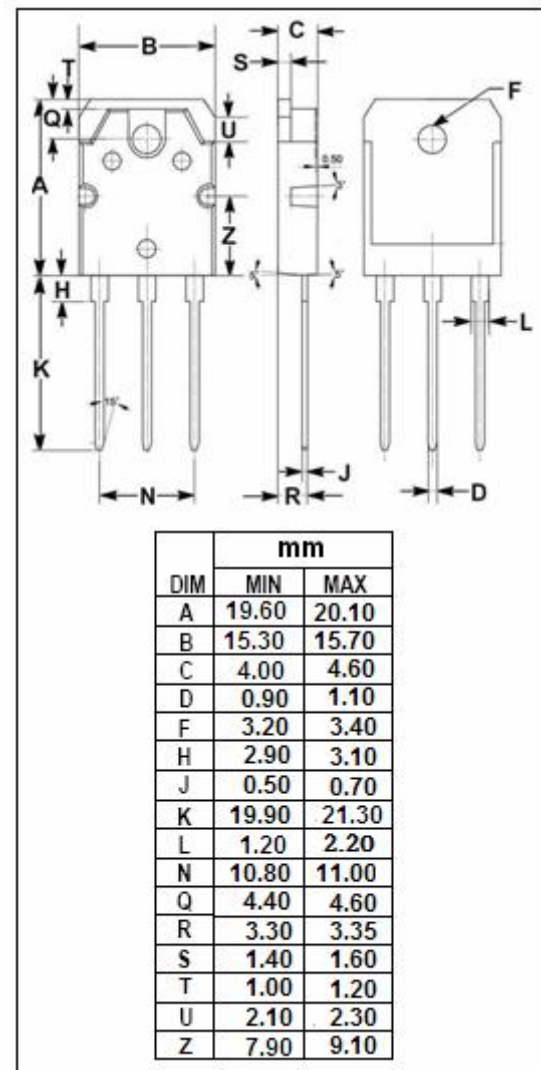
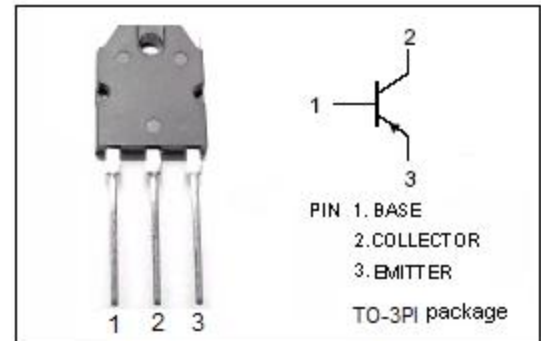
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min.})$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SC2563
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Audio frequency power amplifier applications
- Recommend for 50W audio amplifier output stage

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

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	-8	A
$I_B$	Base Current-Continuous	-0.8	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
$T_J$	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
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -50\text{mA}$ ; $I_B = 0$	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -4\text{A}$ ; $I_B = -0.4\text{A}$			-2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -4\text{A}$ ; $V_{CE} = -5\text{V}$			-2.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -120\text{V}$ ; $I_E = 0$			-50	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-50	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -1\text{A}$ ; $V_{CE} = -5\text{V}$	55		240	
$h_{FE-2}$	DC Current Gain	$I_C = -4\text{A}$ ; $V_{CE} = -5\text{V}$	30			
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f = 1.0\text{MHz}$		150		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C = -1\text{A}$ ; $V_{CE} = -10\text{V}$		90		MHz

### ◆ $h_{FE-1}$ Classifications

R	O	Y
55-110	80-160	120-240

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