

# isc Silicon PNP Power Transistor

## TIP34B

### DESCRIPTION

- DC Current Gain-  
:  $h_{FE} = 40(\text{Min}) @ I_C = -1\text{A}$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(\text{SUS})} = -80\text{V}(\text{Min})$
- Complement to Type TIP33B
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

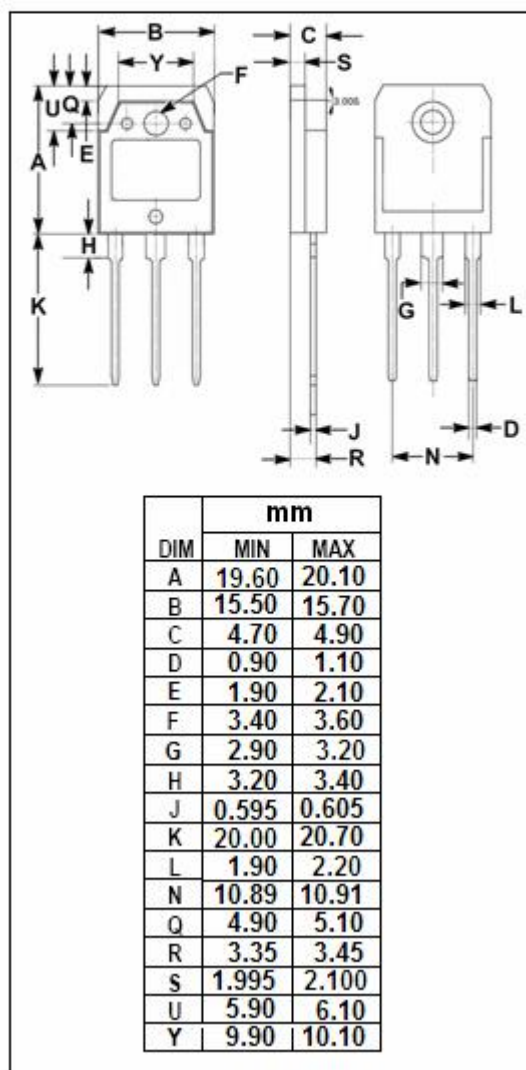
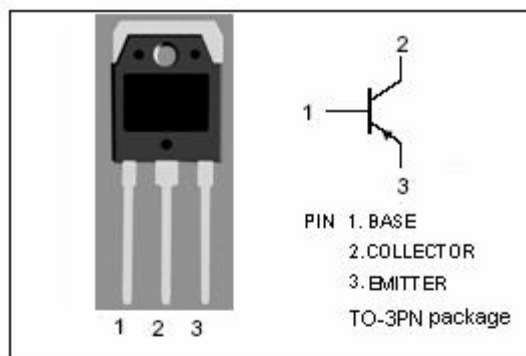
- Designed for use in general purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-10	A
$I_{CM}$	Collector Current-peak	-15	A
$I_B$	Base Current	-3	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	-65~150	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.56	$^\circ\text{C}/\text{W}$



**isc Silicon PNP Power Transistor****TIP34B****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}; I_B = 0$	-80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$		-1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}; I_B = -2.5\text{A}$		-4.0	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	$I_C = -3\text{A}; V_{CE} = -4\text{V}$		-1.6	V
$V_{BE(on)-2}$	Base-Emitter On Voltage	$I_C = -10\text{A}; V_{CE} = -4\text{V}$		-3.0	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -60\text{V}; I_B = 0$		-0.7	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE} = -80\text{V}; V_{EB} = 0$		-0.4	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$		-1.0	mA
$h_{FE-1}$	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -4\text{V}$	40		
$h_{FE-2}$	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -4\text{V}$	20	100	
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}; f_{test} = 1.0\text{MHz}$	3		MHz

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