

# isc Silicon PNP Power Transistor

## TIP36E

### DESCRIPTION

- DC Current Gain-  
:  $h_{FE} = 25(\text{Min}) @ I_C = -1.5A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEQ(SUS)} = -140V(\text{Min})$
- Complement to Type TIP35E
- Current Gain-Bandwidth Product-  
:  $f_T = 3.0\text{MHz}(\text{Min}) @ I_C = -1.0A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

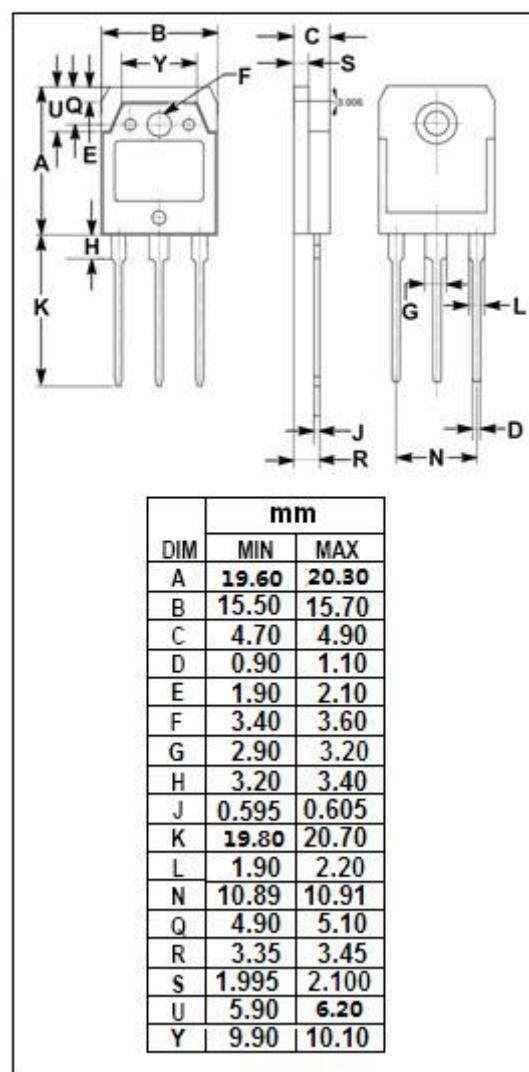
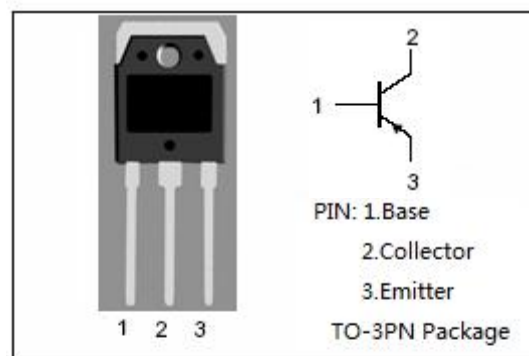
- Designed for use in general purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-180	V
$V_{CEO}$	Collector-Emitter Voltage	-140	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-25	A
$I_{CM}$	Collector Current-peak	-40	A
$I_B$	Base Current	-5	A
$P_C$	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	125	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	1.0	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}; I_B = 0$	-140		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}; I_B = -3\text{A}$		-2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -25\text{A}; I_B = -6.25\text{A}$		-5.0	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	$I_C = -15\text{A}; V_{CE} = -4\text{V}$		-2.0	V
$V_{BE(on)-2}$	Base-Emitter On Voltage	$I_C = -25\text{A}; V_{CE} = -4\text{V}$		-4.0	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -90\text{V}; I_B = 0$		-1.0	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -180\text{V}; I_E = 0$		-0.7	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$		-1.0	mA
$h_{FE-1}$	DC Current Gain	$I_C = -1.5\text{A}; V_{CE} = -4\text{V}$	25		
$h_{FE-2}$	DC Current Gain	$I_C = -15\text{A}; V_{CE} = -4\text{V}$	8		

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