

## isc Silicon NPN Power Transistor

## TIP35AF

## DESCRIPTION

- DC Current Gain-  
:  $h_{FE} = 25(\text{Min}) @ I_C = 1.5\text{A}$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(\text{SUS})} = 60\text{V}(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

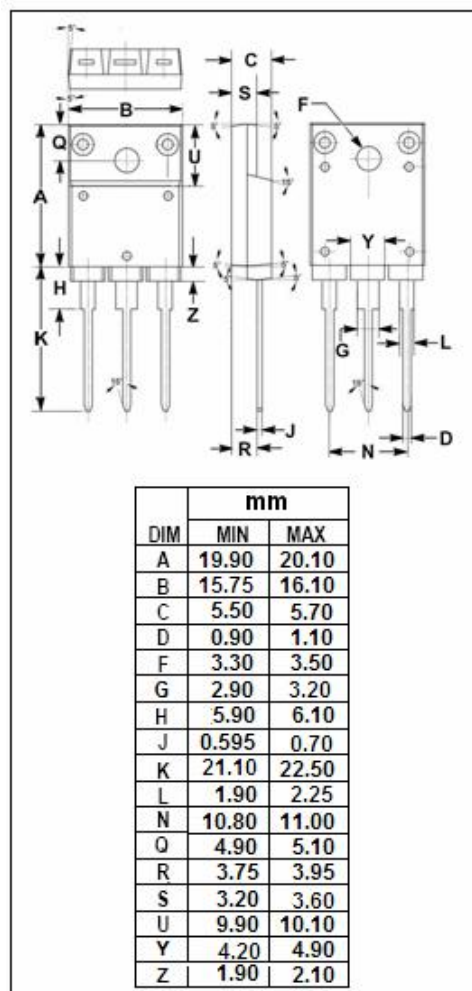
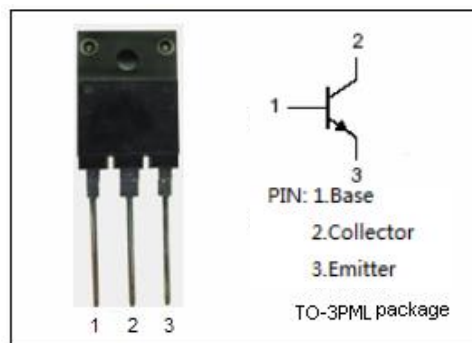
- Designed for use in general purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	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@ $T_C = 25^\circ\text{C}$	50	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	2.5	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****TIP35AF****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 30\text{mA}; I_B = 0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = 15\text{A}; I_B = 1.5\text{A}$		1.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = 25\text{A}; I_B = 5\text{A}$		4.0	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	$V_{CE} = 30\text{V}; I_B = 0$		1.0	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE} = 60\text{V}; V_{EB} = 0$		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	$I_C = 15\text{A}; V_{CE} = 4\text{V}$	15		

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