

## isc Silicon NPN Power Transistor

## ET206

## DESCRIPTION

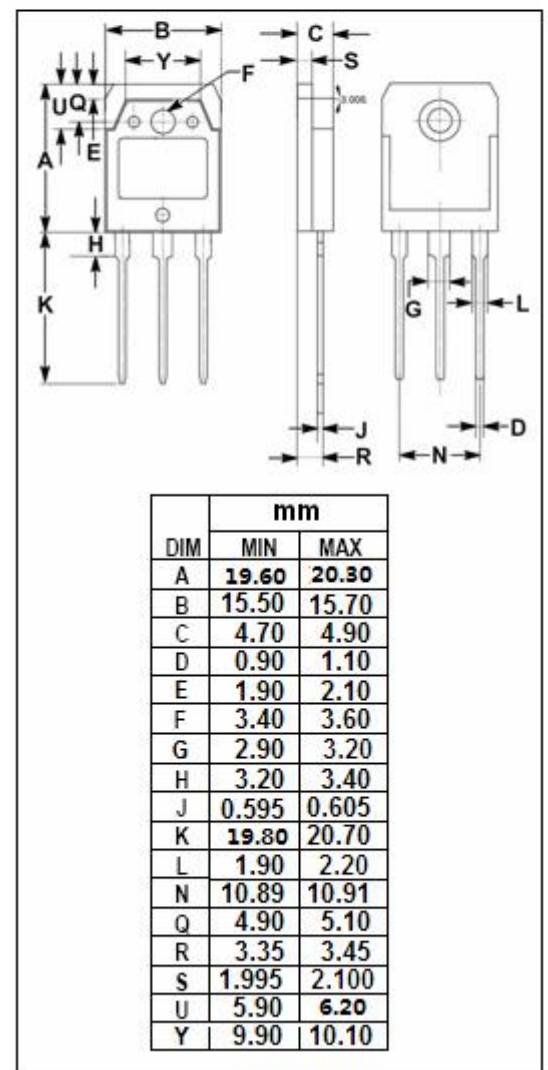
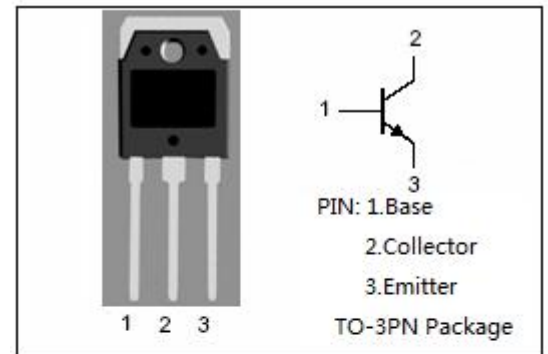
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 500V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching regulator and high voltage switching applications.
- High frequency inverters
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	850	V
$V_{CEO}$	Collector-Emitter Voltage	500	V
$V_{EBO}$	Emitter-Base voltage	10	V
$I_C$	Collector Current-Continuous	10	A
$I_B$	Base Current-Continuous	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 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	$I_C = 10\text{mA}$ ; $I_B = 0$	500			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 1\text{mA}$ ; $I_E = 0$	850			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4\text{A}$ ; $I_B = 800\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4\text{A}$ ; $I_B = 800\text{mA}$			1.2	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 850\text{V}$ ; $I_E = 0$			1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 10\text{V}$ ; $I_C = 0$			1.0	mA
$h_{FE}$	DC Current Gain	$I_C = 1\text{A}$ ; $V_{CE} = 5\text{V}$	15			

## Switching times

$t_{on}$	Rise Time	$I_C = 2\text{A}$ , $I_{B1} = 200\text{mA}$ ; $I_{B2} = -400\text{mA}$ ; $R_L = 150\Omega$ ; $P_W = 20\mu\text{s}$ Duty Cycle $\leq 2\%$			1.0	$\mu\text{s}$
$t_{stg}$	Storage Time				3.5	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$

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