

# isc Silicon NPN Power Transistors

# BUV82/83

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V(\text{Min})\text{-BUV82}$   
=  $450V(\text{Min})\text{-BUV83}$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

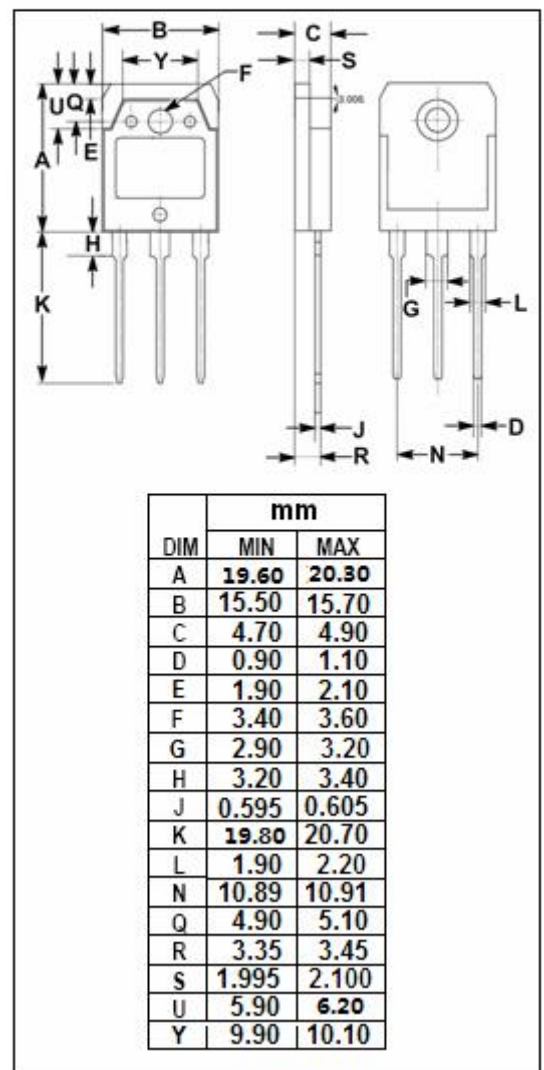
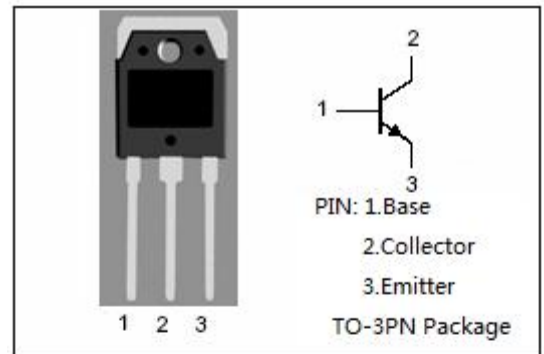
- Designed for use in converters, inverters, switching regulators, motor control systems and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CES}$	Collector- Emitter Voltage $V_{BE}=0$	BUV82	850	V
		BUV83	1000	
$V_{CEO}$	Collector-Emitter Voltage	BUV82	400	V
		BUV83	450	
$V_{EBO}$	Emitter-Base Voltage	10	V	
$I_C$	Collector Current-Continuous	6	A	
$I_{CM}$	Collector Current-Peak	10	A	
$I_B$	Base Current-Continuous	2	A	
$I_{BM}$	Base Current-Peak	3	A	
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W	
$T_J$	Junction Temperature	150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$	

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA ; I <sub>B</sub> = 0	400			V
			450			
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.5A			1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 1.25A			3.0	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.5A			1.4	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 1.25A			1.6	v
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = V <sub>CESmax</sub> ; V <sub>BE</sub> = 0 V <sub>CE</sub> = V <sub>CESmax</sub> ; V <sub>BE</sub> = 0; T <sub>J</sub> = 125°C			1 2	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 10V; I <sub>C</sub> =0			10	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.6A; V <sub>CE</sub> = 5V		22		

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