

**isc Silicon PNP Power Transistor**
**2SB1231**
**DESCRIPTION**

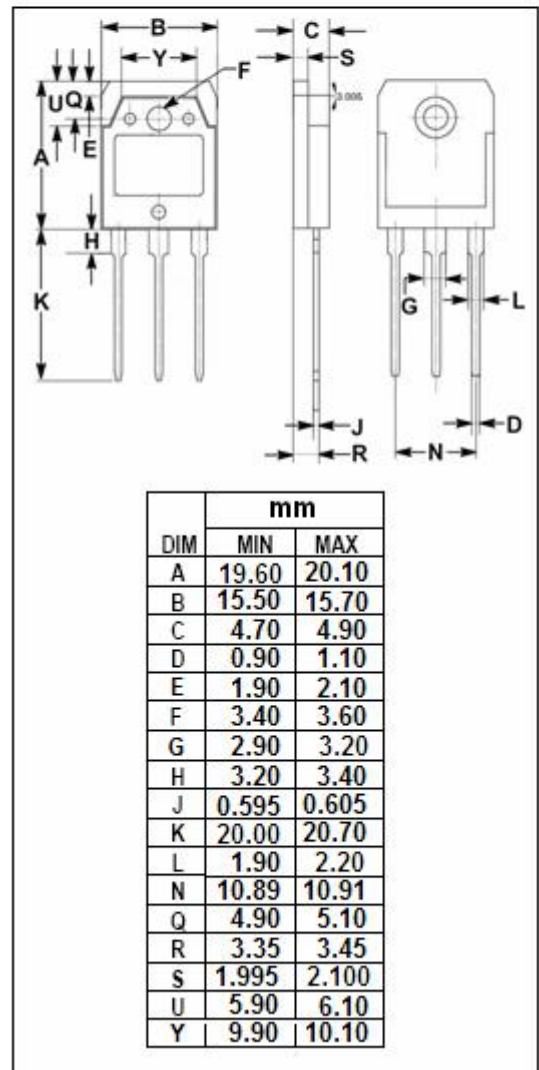
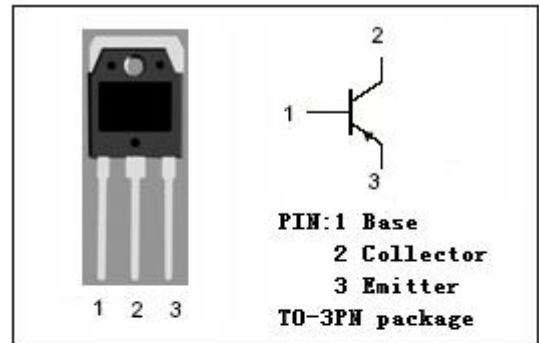
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -100V(\text{Min})$
- High Current Capability
- Wide Area of Safe Operation
- Complement to Type 2SD1841
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for motor drivers, converters and other general High-current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-110	V
$V_{CEO}$	Collector-Emitter Voltage	-100	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-25	A
$I_{CP}$	Collector Current-Pulse	-40	A
$I_B$	Base Current-Continuous	-8	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	120	
$T_J$	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	$I_C = -5\text{mA}$ ; $R_{BE} = \infty$	-100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1\text{mA}$ ; $I_E = 0$	-110			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}$ ; $I_C = 0$	-6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}$ ; $I_B = -1\text{A}$			-0.8	V
$V_{BE(sat)}$	Base -Emitter Saturation Voltage	$I_C = -10\text{A}$ ; $I_B = -1\text{A}$			-1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -100\text{V}$ ; $I_E = 0$			-100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -2.5\text{A}$ ; $V_{CE} = -2\text{V}$	50		140	
$h_{FE-2}$	DC Current Gain	$I_C = -10\text{A}$ ; $V_{CE} = -2\text{V}$	20			

**◆  $h_{FE-1}$  Classifications**

P	Q
50-100	70-140

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