

isc Silicon NPN Power Transistor
2SD731
DESCRIPTION

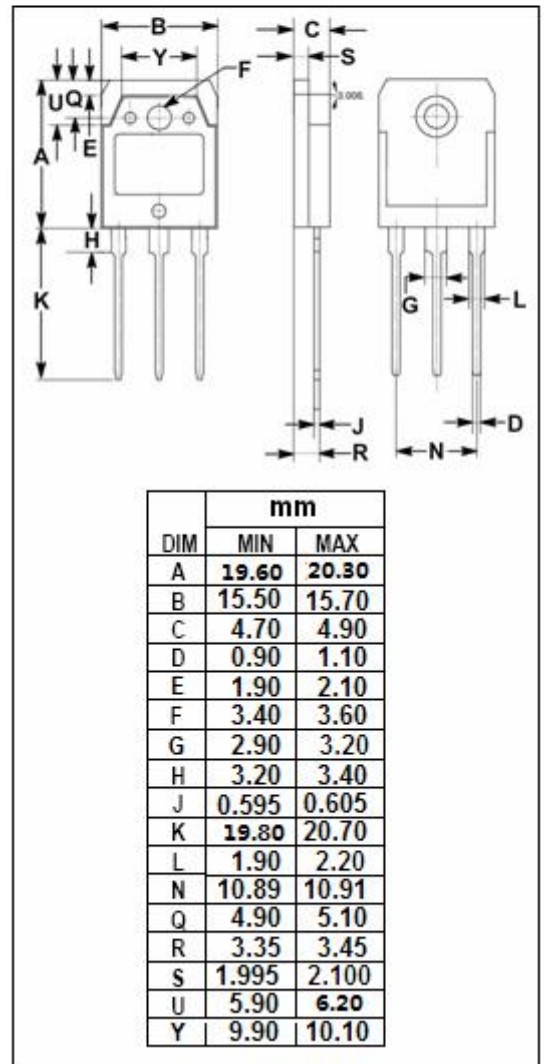
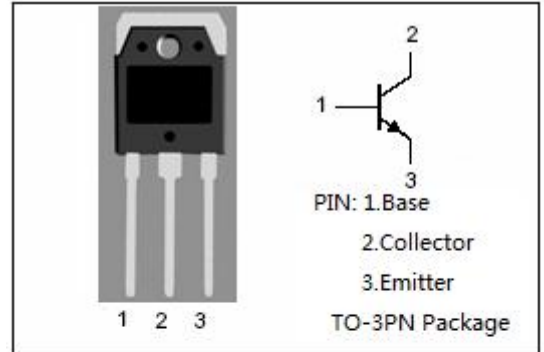
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V(\text{Min})$
- Good Linearity of h_{FE}
- Wide Area of Safe Operation
- Complement to Type 2SB695
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	170	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	10	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	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD731****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	$I_C= 30\text{mA}; I_B= 0$	120			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C= 1\text{mA}; I_E= 0$	170			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E= 1\text{mA}; I_C= 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 0.5\text{A}$			1.5	V
$V_{BE(on)}$	Base -Emitter On Voltage	$I_C= 1\text{A}; V_{CE}= 5\text{V}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 170\text{V}; I_E= 0$			50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			50	μA
h_{FE-1}	DC Current Gain	$I_C= 1\text{A}; V_{CE}= 5\text{V}$	40		200	
h_{FE-2}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 5\text{V}$	20			
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}; V_{CE}= 5\text{V}$		7		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}= 10\text{V}; f_{test}= 1.0\text{MHz}$		180		pF

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