

isc Silicon NPN Power Transistor

BD131

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = 0.5A$
- Collector-Emitter Breakdown Voltage -
: $V_{(BR)CEO} = 45V(\text{Min.})$
- Complement to type BD132

APPLICATIONS

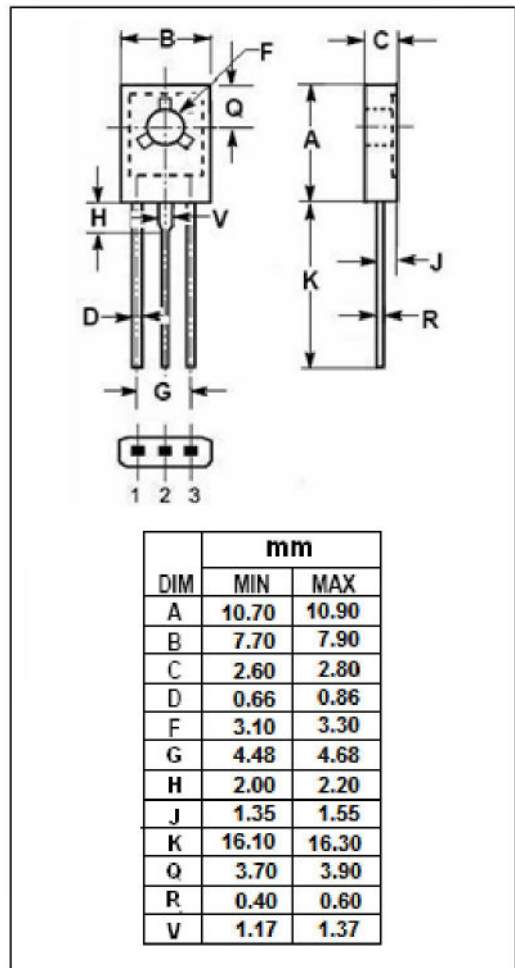
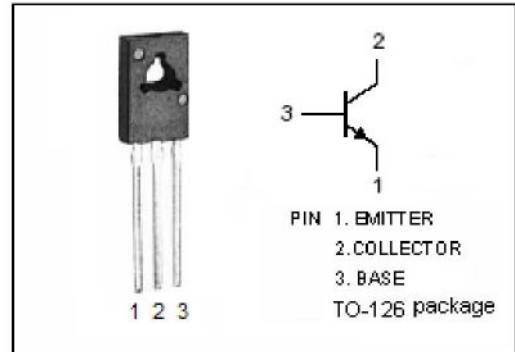
- Designed for medium power and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	6	A
I_{BM}	Base Current-Peak	0.5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	15	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	6	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BD135****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	45			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			0.3	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			0.7	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			1.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=40\text{V}; I_E=0$ $V_{CB}=40\text{V}; I_E=0, T_C=150^\circ\text{C}$			50 10	nA μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3\text{V}; I_C=0$			50	nA
h_{FE-1}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=12\text{V}$	40			
h_{FE-2}	DC Current Gain	$I_C=2\text{A}; V_{CE}=1\text{V}$	20			
f_T	Current-Gain—Bandwidth Product	$I_C=0.25\text{A}; V_{CE}=5\text{V}$	60			MHz