

isc Silicon NPN Power Transistor

BD433

DESCRIPTION

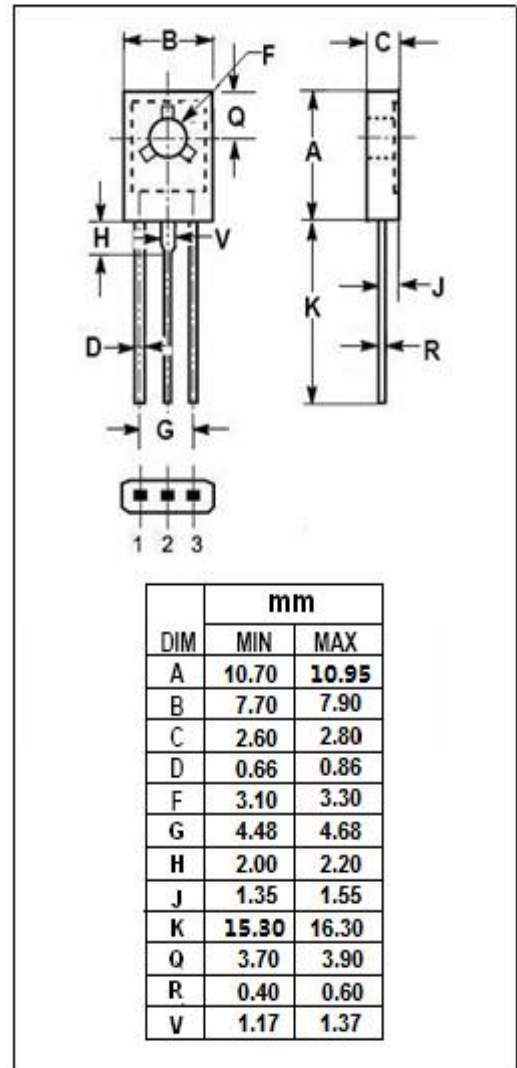
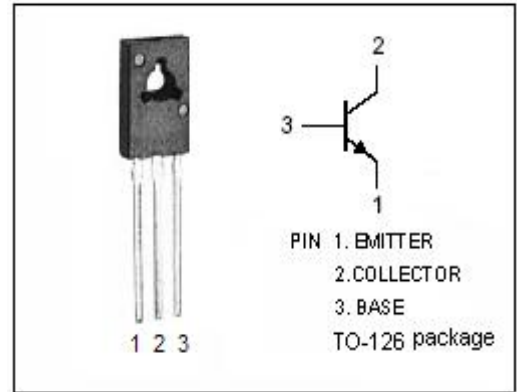
- Collector-Emitter Sustaining Voltage -
: $V_{CEO(SUS)} = 22V(\text{Min})$
- Complement to type BD434
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for medium power linear and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	22	V
V_{CES}	Collector-Emitter Voltage	22	V
V_{CEO}	Collector-Emitter Voltage	22	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Pulse	7	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	36	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	22			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=2\text{A}; V_{CE}=1\text{V}$			1.1	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=22\text{V}; I_E=0$			100	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}=22\text{V}; V_{BE}=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1	mA
h_{FE-1}	DC Current Gain	$I_C=10\text{mA}; V_{CE}=5\text{V}$	40			
h_{FE-2}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=1\text{V}$	85			
h_{FE-3}	DC Current Gain	$I_C=2\text{A}; V_{CE}=1\text{V}$	50			
f_T	Current-Gain—Bandwidth Product	$I_C=0.25\text{A}; V_{CE}=1\text{V}$	3			MHz

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