

isc Silicon PNP Power Transistor

BD830

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -100V(\text{Min})$
- High DC Current Gain
- Low Saturation Voltage
- Complement to Type BD829
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

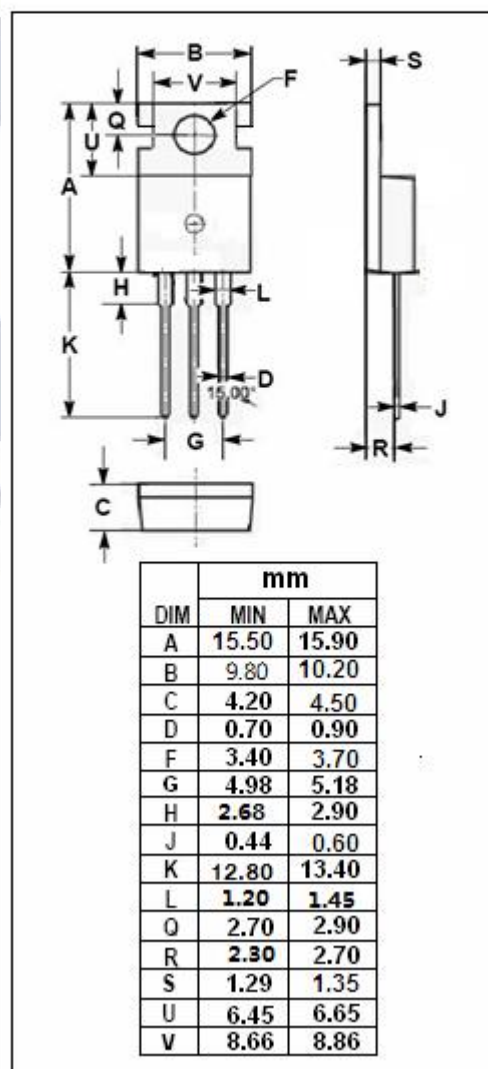
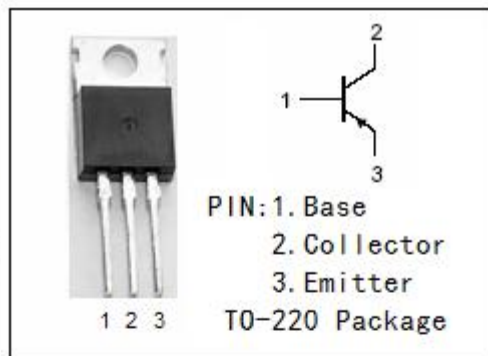
- Designed for driver-stages in hi-fi amplifiers and television circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_c	Collector Current-Continuous	-1.0	A
I_{CP}	Collector Current-Peak	-1.5	A
P_c	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	10	
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	12.5	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor**BD830****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Breakdown Voltage	$I_C = -30\text{mA}; I_B = 0$	-100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}; I_B = -50\text{mA}$			-0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -0.5\text{A}; V_{CE} = -2\text{V}$			-1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -30\text{V}; I_E = 0$			-0.1	μA
		$V_{CB} = -30\text{V}; I_E = 0; T_C = 125^\circ\text{C}$			-10	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-10	μA
h_{FE-1}	DC Current Gain	$I_C = -5\text{mA}; V_{CE} = -2\text{V}$	25			
h_{FE-2}	DC Current Gain	$I_C = -150\text{mA}; V_{CE} = -2\text{V}$	40		250	
h_{FE-3}	DC Current Gain	$I_C = -500\text{mA}; V_{CE} = -2\text{V}$	25			
f_T	Current-Gain—Bandwidth Product	$I_C = -50\text{mA}; V_{CE} = -5\text{V}$		75		MHz