

isc Silicon PNP Power Transistors
BD544/A/B/C
DESCRIPTION

- 70 W at 25°C Case Temperature
- Complement to Type BD543/A/B/C
- 8 A Continuous Collector Current
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

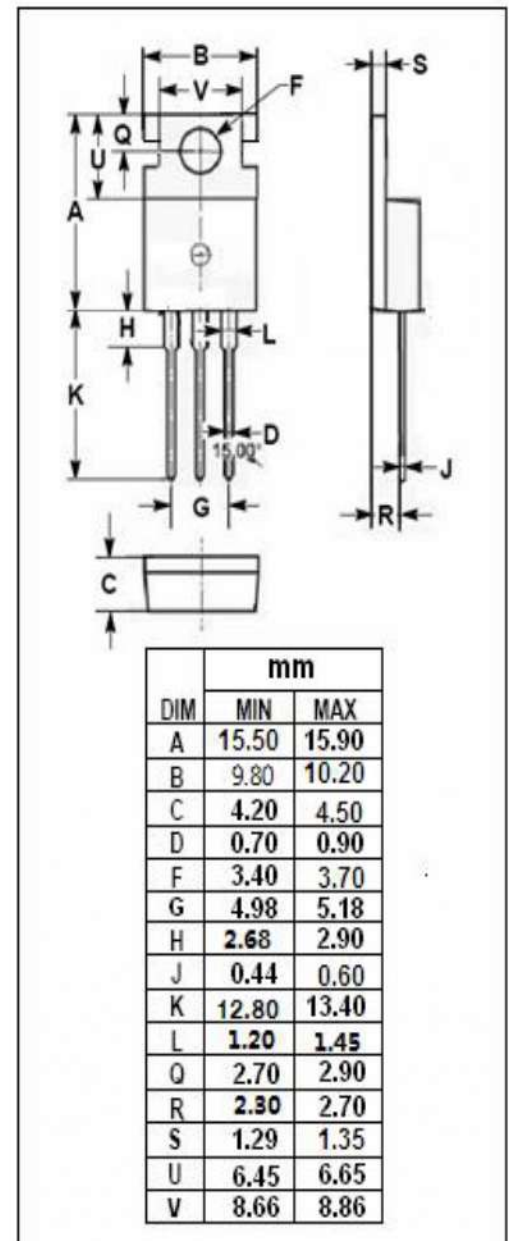
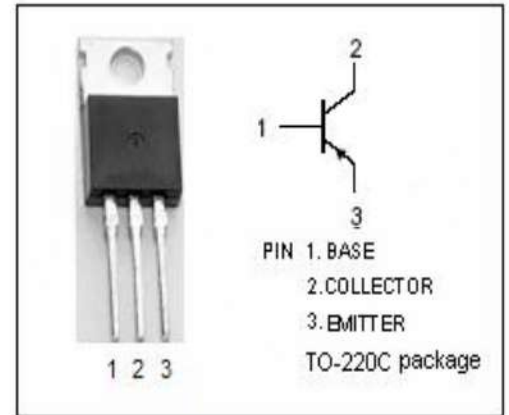
- Designed for high power audio amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD544	-40
		BD544A	-60
		BD544B	-80
		BD544C	-100
V_{CEO}	Collector-Emitter Voltage	BD544	-40
		BD544A	-60
		BD544B	-80
		BD544C	-100
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak	-10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	70	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	
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	1.79	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C/W}$



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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	BD544	$I_C = -30\text{mA} ; I_B = 0$	-40			V
		BD544A		-60			
		BD544B		-80			
		BD544C		-100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C = -3\text{A} ; I_B = -0.3\text{A}$			-0.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C = -5\text{A} ; I_B = -1\text{A}$			-0.5	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage		$I_C = -8\text{A} ; I_B = -1.6\text{A}$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -5\text{A} ; V_{CE} = -4\text{V}$			-1.4	V
I_{CES}	Collector Cutoff Current	BD544	$V_{CE} = -40\text{V} ; V_{BE} = 0$			-0.4	mA
		BD544A	$V_{CE} = -60\text{V} ; V_{BE} = 0$			-0.4	
		BD544B	$V_{CE} = -80\text{V} ; V_{BE} = 0$			-0.4	
		BD544C	$V_{CE} = -100\text{V} ; V_{BE} = 0$			-0.4	
I_{CEO}	Collector Cutoff Current	BD544/A	$V_{CE} = -30\text{V} ; I_B = 0$			-0.7	mA
		BD544B/C	$V_{CE} = -60\text{V} ; I_B = 0$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V} ; I_C = 0$			-1	mA
h_{FE-1}	DC Current Gain		$I_C = -1\text{A} ; V_{CE} = -4\text{V}$	60			
h_{FE-2}	DC Current Gain		$I_C = -3\text{A} ; V_{CE} = -4\text{V}$	40			
h_{FE-3}	DC Current Gain		$I_C = -5\text{A} ; V_{CE} = -4\text{V}$	15			
Switching Times							
t_{on}	Turn-On Time		$I_C = -6\text{A} ; I_{B1} = -I_{B2} = -0.6\text{A} ;$ $V_{BE(off)} = 4\text{V} , R_L = 5 \Omega$		0.4		$\mu \text{ s}$
t_{off}	Turn-Off Time				0.7		$\mu \text{ s}$

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