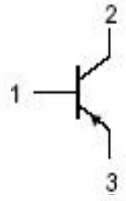
isc Silicon PNP Power Transistors — BD544/A/B/C

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.



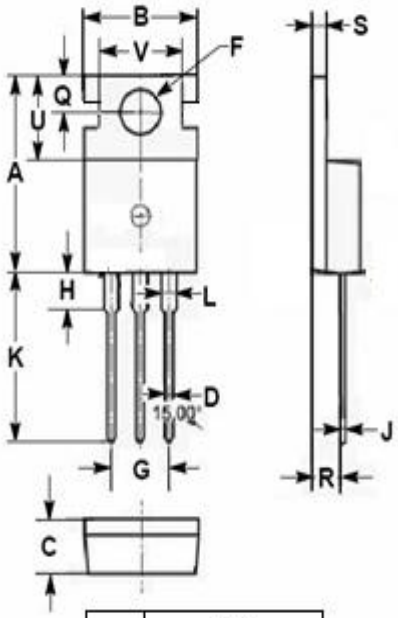
PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD544	-40	V
		BD544A	-60	
		BD544B	-80	
		BD544C	-100	
V_{CEO}	Collector-Emitter Voltage	BD544	-40	V
		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℃		70	W
	Collector Power Dissipation @ T_a=25℃		2	
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.79	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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

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