

INCHANGE Semiconductor

isc Product Specification

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

APPLICATIONS

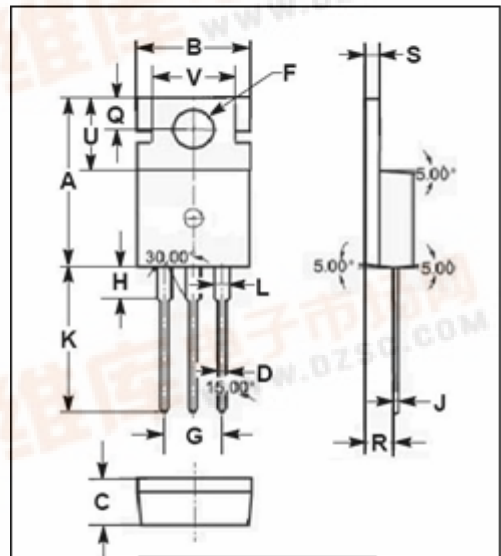
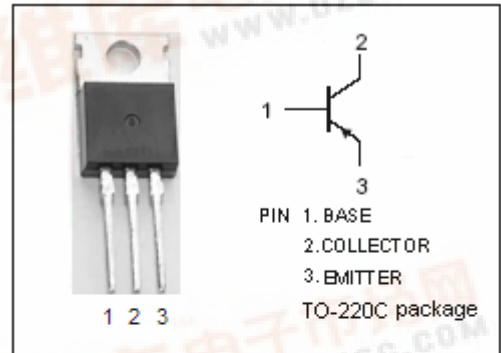
- Designed for high power audio amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

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°C	70	W	
	Collector Power Dissipation @ T _a =25°C	2		
T _J	Junction Temperature	150	°C	
T _{stg}	Storage Temperature Range	-65~150	°C	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance,Junction to Case	4.17	°C/W
R _{th j-a}	Thermal Resistance,Junction to Ambient	62.5	°C/W



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86



isc Silicon PNP Power Transistors

BD544/A/B/C

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		μs
t_{off}	Turn-Off Time			0.7		μs