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Silicon PNP Power Transistor

BD202/204

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
 - : $V_{(BR)CEO} = -45V$ (Min)- BD202
 - 60V(Min)- BD204
- Complement to Type BD201/203

APPLICATIONS

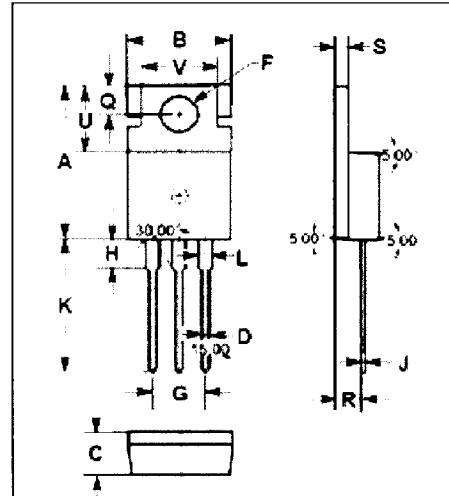
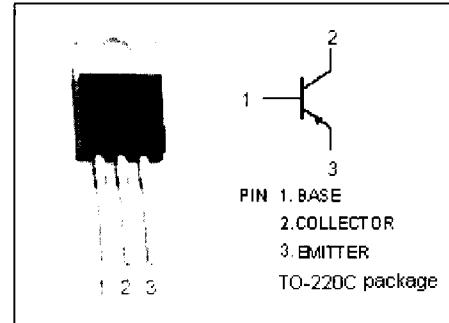
- Designed for use in hi-fi equipment delivering an output of 15 to 15 W into a 4Ω or 8Ω load.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD202	-60
		BD204	-60
V_{CEO}	Collector-Emitter Voltage	BD202	-45
		BD204	-60
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak $t_p \leq 10ms$	-12	A
I_{CSM}	Collector Current-Peak $t_p \leq 2ms$	-25	A
I_B	Base Current	-3	A
P_c	Collector Power Dissipation @ $T_c=25^\circ C$	60	W
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	2.08	°C/W
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	70	°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

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	BD202	I _C = -0.2A ; I _B = 0	-45		V
		BD204		-60		
V _{(BR)CBO}	Collector-Base Breakdown Voltage		I _C = -1mA ; I _E = 0	-60		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage		I _E = -1mA ; I _C = 0	-5		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage		I _C = -3A; I _B = -0.3A		-1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage		I _C = -6A; I _B = -0.6A		-1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage		I _C = -6A; I _B = -0.6A		-2.0	V
V _{BE(on)}	Base-Emitter On Voltage		I _C = -3A ; V _{CE} = -2V		-1.5	V
I _{CEO}	Collector Cutoff Current		V _{CE} = -30V; I _B = 0		-0.2	mA
I _{CBO}	Collector Cutoff Current		V _{CB} = -40V; I _E = 0; T _J = 150°C		-1.0	mA
I _{EBO}	Emitter Cutoff Current		V _{EB} = -5V; I _C =0		-0.5	mA
h _{FE}	DC Current Gain	BD202	I _C = -3A ; V _{CE} = -2V	30		
		BD204	I _C = -2A ; V _{CE} = -2V			
f _T	Current-Gain—Bandwidth Product		I _C = -0.3A ; V _{CE} = -3V, f _{test} = 1.0MHz	7.0		MHz

Switching Times

t _{on}	Turn-On Time	I _C = -2A; I _{B1} = -I _{B2} = -0.2A		1	μ s
t _{off}	Turn-Off Time			2	μ s