

isc Silicon PNP Power Transistor

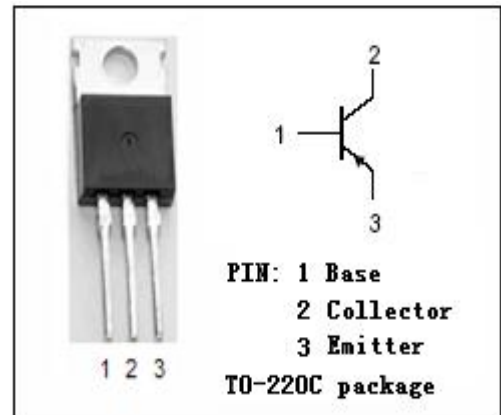
BD202/204

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -45V(\text{Min})$ - BD202
-60V(Min)- BD204
- Complement to Type BD201/203
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

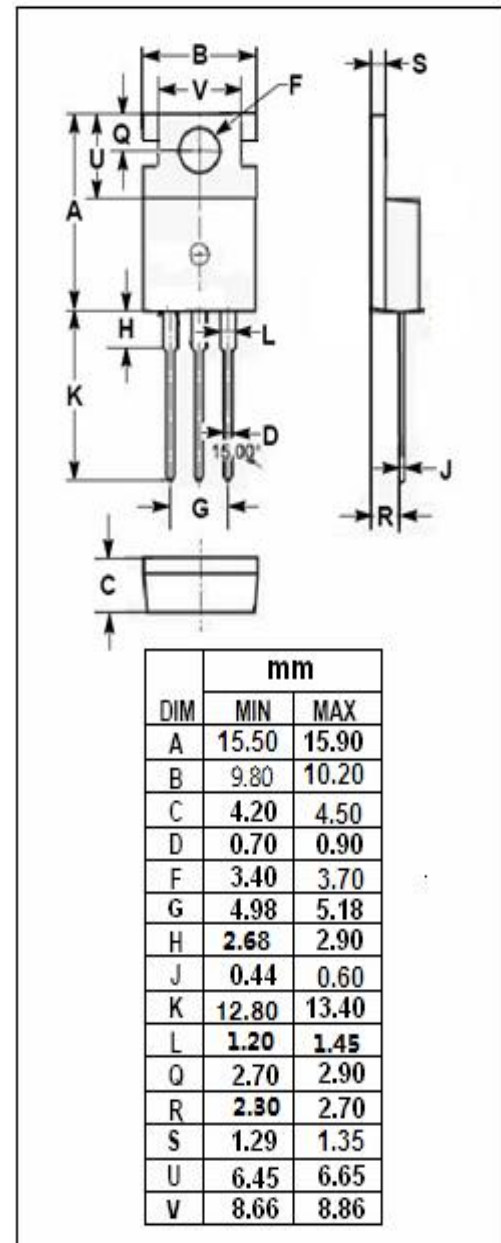
APPLICATIONS

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



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

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

isc Silicon PNP Power Transistor

BD202/204

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 = -50mA ; 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			
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	μs
t _{off}	Turn-Off Time		2	μs

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.