

Silicon NPN Power Transistors

BDT65C

DESCRIPTION

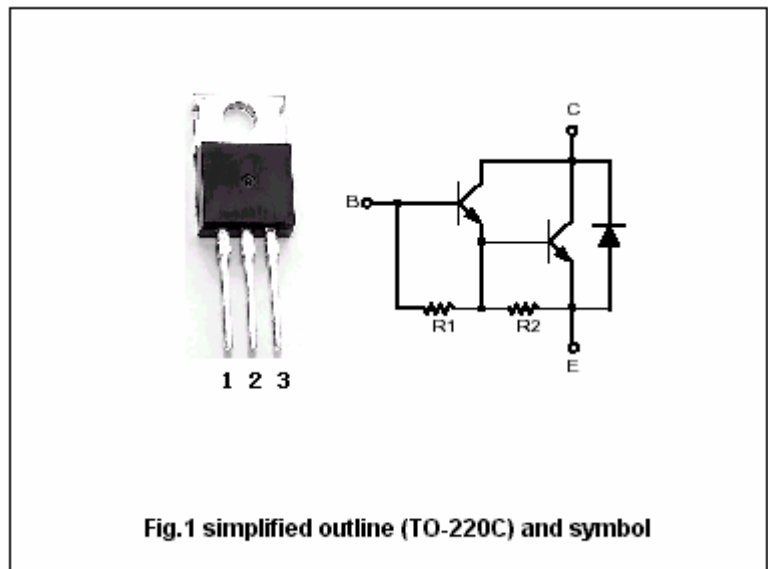
- With TO-220C package
- High DC Current Gain
- DARLINGTON
- Complement to type BDT64C

APPLICATIONS

- For audio output stages and general purpose amplifier and switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	120	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current-DC		12	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	125	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =30mA, I _B =0	120			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =5A, I _B =20mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =10A, I _B =100mA			3.0	V
V _{BE}	Base-emitter on voltage	I _C =5A; V _{CE} =4V			2.5	V
I _{CBO}	Collector cut-off current	V _{CB} =120V, I _E =0 V _{CB} =60V, I _E =0; T _j =150℃			0.4 2.0	mA
I _{CEO}	Collector cut-off current	V _{CE} =60V, I _B =0			0.2	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			5	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =4V		1500		
h _{FE-2}	DC current gain	I _C =5A; V _{CE} =4V	1000			
h _{FE-3}	DC current gain	I _C =12A; V _{CE} =4V		1000		
V _{F-1}	Forward diode voltage	I _F =5A			2.0	V
V _{F-2}	Forward diode voltage	I _F =12A		2.0		V
C _C	Collector capacitance	I _E =0; V _{CB} =10V; f=1MHz		200		pF
t _{on}	Turn-on time	I _C =5A, I _{Bon} =-I _{Boff} =20mA		1.0	2.5	μs
t _{off}	Turn-off time			6.0	10	μs

