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

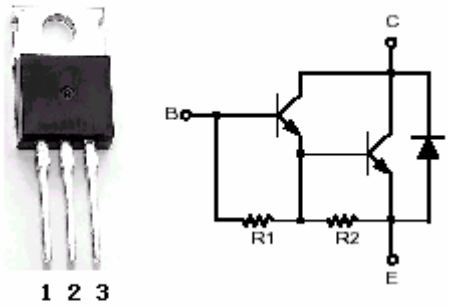

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

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□	125	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

Silicon NPN Power Transistors BDT65C

CHARACTERISTICS

Tj=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

PACKAGE OUTLINE

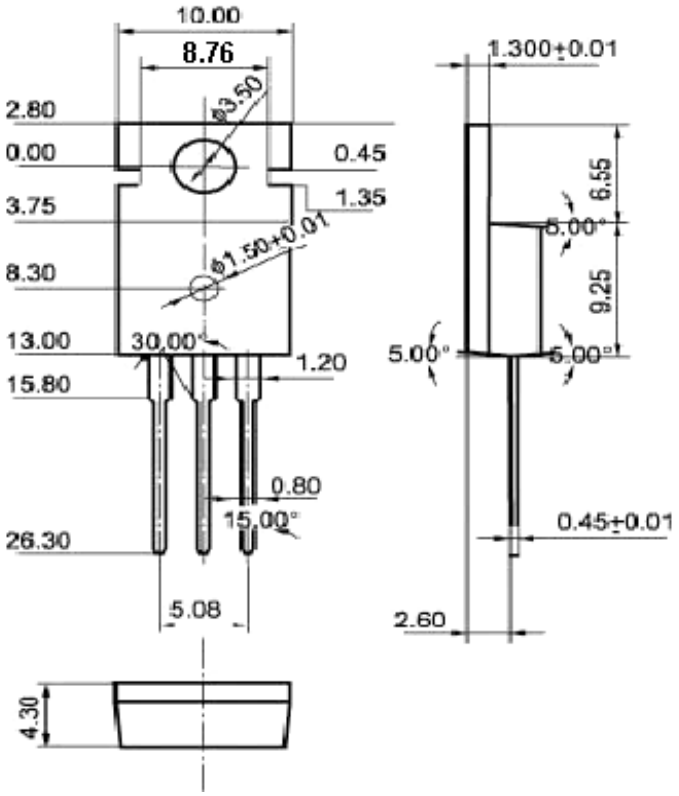

Fig.2 Outline dimensions