

Silicon PNP Darlington Power Transistors

BDT62/A/B/C

DESCRIPTION

- DC Current Gain $-h_{FE} = 1000(\text{Min})@ I_C = -3A$
- Collector-Emitter Sustaining Voltage-
 : $V_{CEO(\text{SUS})} = -60V(\text{Min})$ - BDT62; $-80V(\text{Min})$ - BDT62A;
 $-100V(\text{Min})$ - BDT62B; $-120V(\text{Min})$ - BDT62C
- Complement to Type BDT63/A/B/C

APPLICATIONS

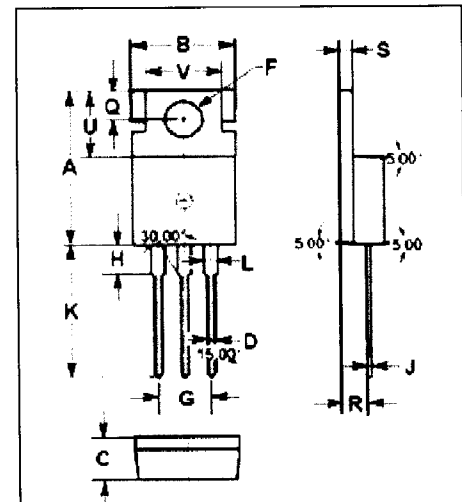
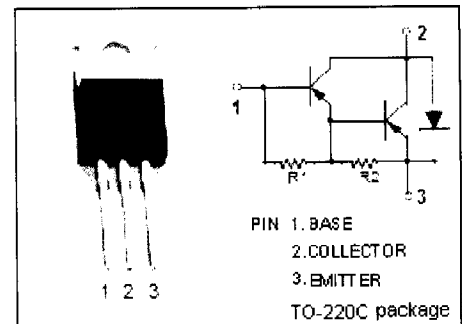
- Designed for use in audio amplifier output stages , general purpose amplifier and high speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BDT62	-60	V
		BDT62A	-80	
		BDT62B	-100	
		BDT62C	-120	
V_{CEO}	Collector-Emitter Voltage	BDT62	-60	V
		BDT62A	-80	
		BDT62B	-100	
		BDT62C	-120	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-10	A	
I_{CM}	Collector Current-Peak	-15	A	
I_B	Base Current	-0.25	A	
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	90	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	1.39	$^\circ\text{C/W}$
R_{th-j-a}	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



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

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BDT62	-60			V	
		BDT62A	-80				
		BDT62B	-100				
		BDT62C	-120				
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -3A; I_B = -12mA$			-2.0	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -8A; I_B = -80mA$			-2.5	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3A; V_{CE} = -3V$			-2.5	V	
I_{CBO}	Collector Cutoff Current	BDT62	$V_{CB} = -60V; I_E = 0$ $V_{CB} = -30V; I_E = 0; T_J = 150^\circ\text{C}$			-0.2 -2.0	mA
		BDT62A	$V_{CB} = -80V; I_E = 0$ $V_{CB} = -40V; I_E = 0; T_J = 150^\circ\text{C}$			-0.2 -2.0	
		BDT62B	$V_{CB} = -100V; I_E = 0$ $V_{CB} = -50V; I_E = 0; T_J = 150^\circ\text{C}$			-0.2 -2.0	
		BDT62C	$V_{CB} = -120V; I_E = 0$ $V_{CB} = -60V; I_E = 0; T_J = 150^\circ\text{C}$			-0.2 -2.0	
I_{CEO}	Collector Cutoff Current	BDT62	$V_{CE} = -30V; I_B = 0$			-0.5	mA
		BDT62A	$V_{CE} = -40V; I_B = 0$			-0.5	
		BDT62B	$V_{CE} = -50V; I_B = 0$			-0.5	
		BDT62C	$V_{CE} = -60V; I_B = 0$			-0.5	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-5	mA	
h_{FE-1}	DC Current Gain	$I_C = -3A; V_{CE} = -3V$	1000				
h_{FE-2}	DC Current Gain	$I_C = -10A; V_{CE} = -3V$		200			
V_{ECF}	C-E Diode Forward Voltage	$I_E = -3A$			-2.0	V	

Switching Times

t_{on}	Turn-On Time	$I_C = -3A; I_{B1} = -I_{B2} = -12mA$		0.5		μs
t_{off}	Turn-Off Time			2.5		μs