

isc Silicon PNP Darlington Power Transistors

BDT62/A/B/C

DESCRIPTION

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

APPLICATIONS

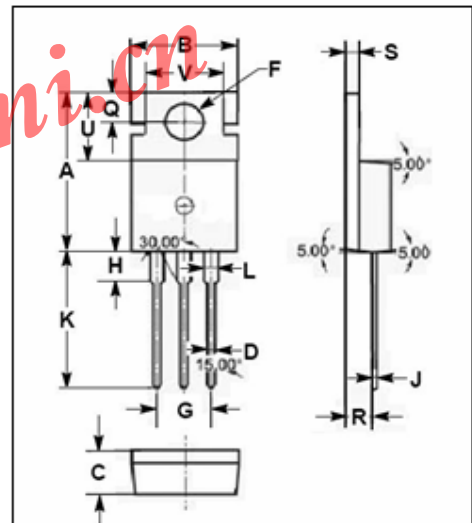
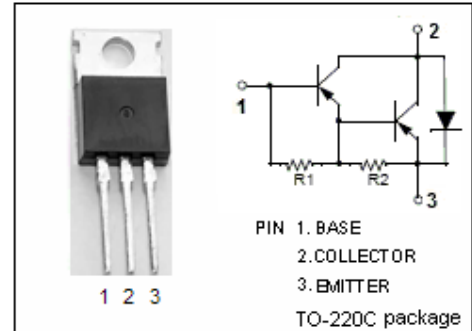
- Designed for use in audio amplifier output stages , general purpose amplifier and high speed switching applications

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	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C}/\text{W}$



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		$\mu\text{s}$
$t_{off}$	Turn-Off Time			2.5		$\mu\text{s}$

isc Website: [www.iscsemi.cn](http://www.iscsemi.cn)