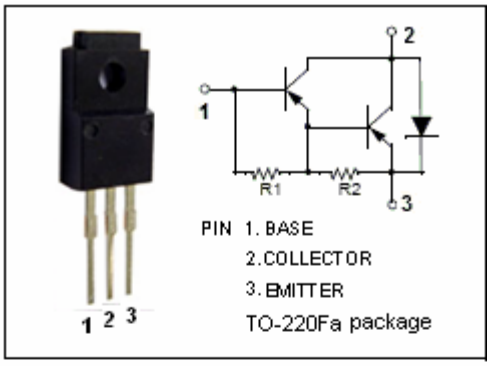
isc Silicon PNP Darlington Power Transistors BDT60F/AF/BF/CF

DESCRIPTION

- DC Current Gain -h_{FE} = 750(Min)@ I_C= -1.5A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = -60V(Min)- BDT60F; -80V(Min)- BDT60AF
  -100V(Min)- BDT60BF; -120V(Min)- BDT60CF
- Complement to Type BDT61F/61AF/61BF/61CF

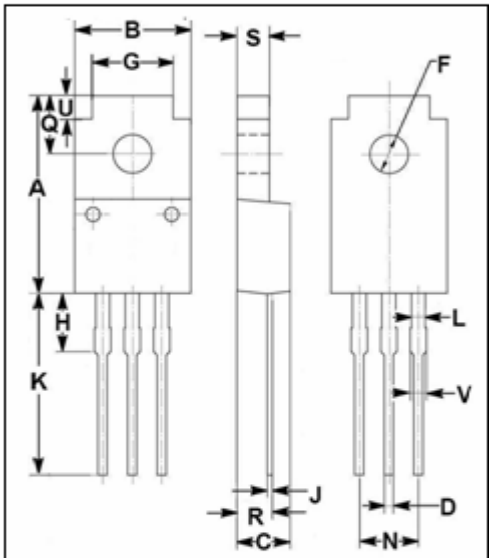
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDT60F	-60	V
		BDT60AF	-80	
		BDT60BF	-100	
		BDT60CF	-120	
V_{CEO}	Collector-Emitter Voltage	BDT60F	-60	V
		BDT60AF	-80	
		BDT60BF	-100	
		BDT60CF	-120	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-4	A
I_{CM}	Collector Current-Pulse		-6	A
I_B	Base Current		-0.1	A
P_C	Collector Power Dissipation T_C=25℃		25	W
T_j	Junction Temperature		150	℃
T_{stg}	Storage Ttemperature Range		-65~150	℃



DIM	mm MIN	MAX
A	16.85	17.15
B	9.90	10.10
C	4.35	4.65
D	0.75	0.80
F	3.20	3.40
G	6.90	7.10
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.95	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDT60F	I_C= -30mA; I_B= 0	-60			V
		BDT60AF		-80			
		BDT60BF		-100			
		BDT60CF		-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= -1.5A; I_B= -6mA			-2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= -1.5A ; V_{CE}= -3V			-2.5	V
I_{CBO}	Collector Cutoff Current		V_{CB}= -30V; I_E= 0 V_{CB}= $^1/_2V_{CBO}$; I_E= 0; T_J=150℃			-0.2 -1	mA
I_{CEO}	Collector Cutoff Current		V_{CE}= $^1/_2V_{CEO}$; I_B= 0			-0.2	mA
I_{EBO}	Emitter Cutoff Current		V_{EB}= -5V; I_C= 0			-5	mA
h_{FE-1}	DC Current Gain		I_C= -0.5A ; V_{CE}= -3V		2000		
h_{FE-2}	DC Current Gain		I_C= -1.5A ; V_{CE}= -3V	750			
h_{FE-3}	DC Current Gain		I_C= -4A ; V_{CE}= -3V		250		
V_{ECF-1}	C-E Diode Forward Voltage		I_F= 1.5A			2	V
V_{ECF-2}	C-E Diode Forward Voltage		I_F= 4A		2.1		V
Switching Times							
t_{on}	Turn-On Time		I_C= -1.5A; I_{B1}= -I_{B2}= -6mA		0.3	1.5	μs
t_{off}	Turn-Off Time				1.5	5.0	μs