

Silicon PNP Power Transistors

BDT82/84/86/88

DESCRIPTION

- DC Current Gain $-h_{FE} = 40(\text{Min})@ I_C = -5A$
- Collector-Emitter Sustaining Voltage-
 : $V_{CEO(SUS)} = -60V(\text{Min})$ - BDT82; $-80V(\text{Min})$ - BDT84;
 $-100V(\text{Min})$ - BDT86; $-120V(\text{Min})$ - BDT88
- Complement to Type BDT81/83/85/87

APPLICATIONS

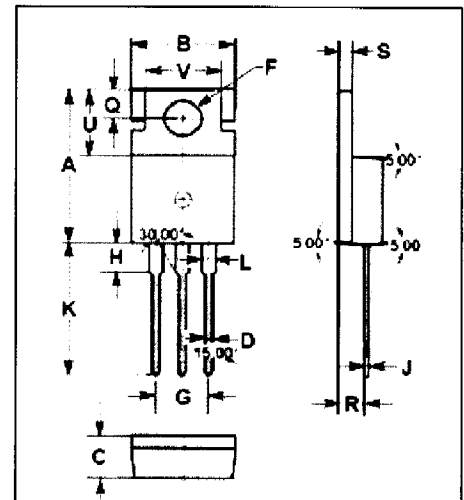
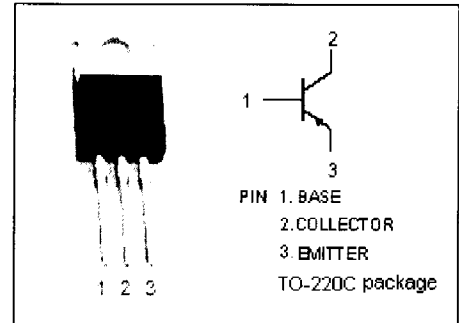
- Designed for use in audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BDT82	-60	V
		BDT84	-80	
		BDT86	-100	
		BDT88	-120	
V_{CEO}	Collector-Emitter Voltage	BDT82	-60	V
		BDT84	-80	
		BDT86	-100	
		BDT88	-120	
V_{EBO}	Emitter-Base Voltage	-7	V	
I_C	Collector Current-Continuous	-15	A	
I_{CM}	Collector Current-Peak	-20	A	
I_B	Base Current	-4	A	
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	125	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	$^\circ\text{C/W}$
$R_{th\ j-a}$	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



Silicon PNP Power Transistors

BDT82/84/86/88

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CE(sus)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}; I_B = 0$	BDT82	-60			V
			BDT84	-80			
			BDT86	-100			
			BDT88	-120			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}; I_B = -0.5\text{A}$			-1.0	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -7\text{A}; I_B = -0.7\text{A}$			-1.6	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -5\text{A}; V_{CE} = -4\text{V}$			-1.5	V	
I_{CES}	Collector Cutoff Current	$V_{CE} = 0.8V_{CB0max}; V_{BE} = 0$			-1	mA	
I_{CBO}	Collector Cutoff Current	$V_{CB} = V_{CB0max}; I_E = 0$			-0.2	mA	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -7\text{V}; I_C = 0$			-0.1	mA	
h_{FE-1}	DC Current Gain	$I_C = -50\text{mA}; V_{CE} = -10\text{V}$	40				
h_{FE-2}	DC Current Gain	$I_C = -5\text{A}; V_{CE} = -4\text{V}$	40				
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}$		20		MHz	

Switching Times

t_{on}	Turn-On Time	$I_C = -7\text{A}; I_{B1} = -I_{B2} = -0.7\text{A}$			1	μs
t_{off}	Turn-Off Time				2	μs