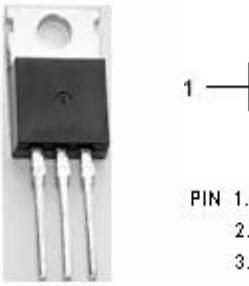
isc Silicon PNP Power Transistor — BDT92/94/96

DESCRIPTION

- DC Current Gain- h_{FE}= 20~200@ I_C= -4A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = -60V(Min)- BDT92; -80V(Min)- BDT94;
  -100V(Min)- BDT96
- Complement to Type BDT91/93/95
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

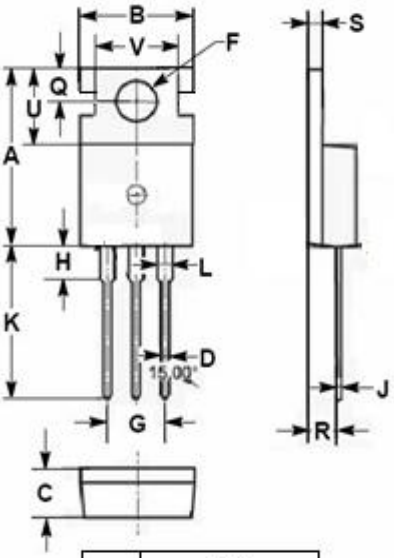


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDT92	-60	V
		BDT94	-80	
		BDT96	-100	
V_{CEO}	Collector-Emitter Voltage	BDT92	-60	V
		BDT94	-80	
		BDT96	-100	
V_{EBO}	Emitter-Base Voltage		-7	V
I_C	Collector Current-Continuous		-10	A
I_{CM}	Collector Current-Peak		-20	A
I_B	Base Current-Continuous		-4	A
P_C	Collector Power Dissipation @ T_C=25℃		90	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.4	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	70	℃/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	BDT92	I_C= -30mA ; I_B= 0	-60			V
		BDT94		-80			
		BDT96		-100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C= -4A; I_B= -0.4A			-1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C= -10A; I_B= -3.3A			-3	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= -4A; V_{CE}= -4V			-1.6	V
I_{CBO}	Collector Cutoff Current		V_{CB}= V_{CBOmax}; I_E= 0 V_{CB}=$^1/_2V_{CBOmax}$; I_E= 0,T_J=150℃			-0.1 -1	mA
I_{CEO}	Collector Cutoff Current		V_{CE}= V_{CEOmax} V; I_B= 0			-0.2	mA
I_{EBO}	Emitter Cutoff Current		V_{EB}= -7V; I_C= 0			-0.1	mA
h_{FE-1}	DC Current Gain		I_C= -4A ; V_{CE}= -4V	20		200	
h_{FE-2}	DC Current Gain		I_C= -10A ; V_{CE}= -4V	5			
f_T	Current-Gain—Bandwidth Product		I_C= -500mA ; V_{CE}= -10V	4			MHz
Switching times							
t_{on}	Turn-On Time		I_C= -4A; I_{B1}= -I_{B2}= -0.4A		0.5	1.5	μs
t_{off}	Turn-Off Time				1	3	μs

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