

isc Silicon PNP Power Transistors

BDT32/A/B/C

DESCRIPTION

- DC Current Gain $-h_{FE} = 25(\text{Min})@ I_{C} = -1.0\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -40\text{V}(\text{Min})$ - BDT32; $-60\text{V}(\text{Min})$ - BDT32A
 $-80\text{V}(\text{Min})$ - BDT32B; $-100\text{V}(\text{Min})$ - BDT32C
- Complement to Type BDT31/A/B/C

APPLICATIONS

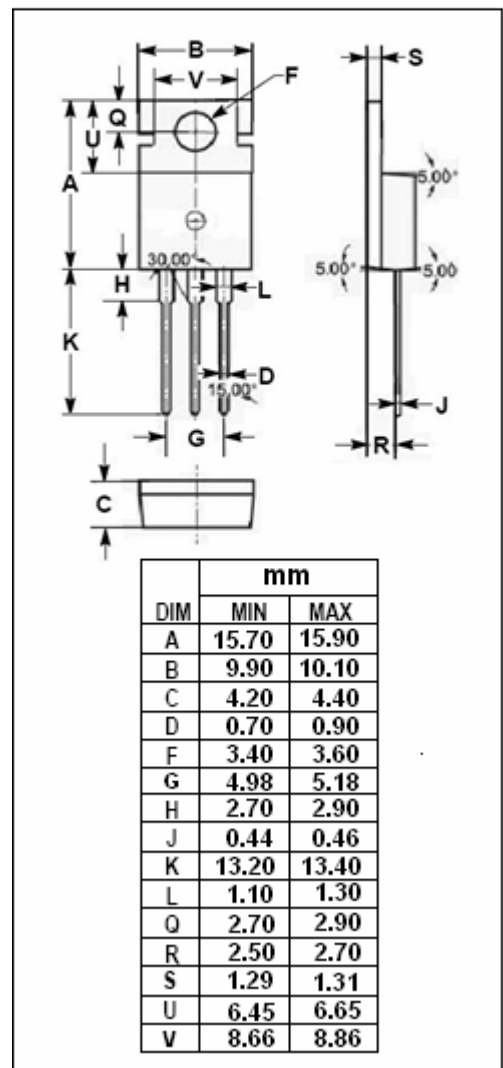
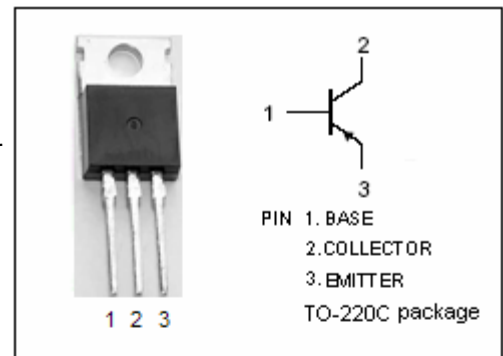
- Designed for use in audio output stages and general amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDT32	-80	V
		BDT 32A	-100	
		BDT 32B	-120	
		BDT 32C	-140	
V_{CEO}	Collector-Emitter Voltage	BDT32	-40	V
		BDT 32A	-60	
		BDT 32B	-80	
		BDT 32C	-100	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-3	A
I_{CM}	Collector Current-Peak		-5	A
I_B	Base Current		-1	A
P_C	Collector Power Dissipation $T_C=25^{\circ}C$		40	W
T_j	Junction Temperature		150	$^{\circ}C$
T_{stg}	Storage Ttemperature Range		-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.12	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	70	°C/W



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDT32	$I_C = -30\text{mA}; I_B = 0$	-40			V
		BDT 32A		-60			
		BDT 32B		-80			
		BDT 32C		-100			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = -3\text{A}; I_B = -0.375\text{A}$			-1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -3\text{A}; V_{CE} = -4\text{V}$			-1.8	V
I_{CES}	Collector Cutoff Current		$V_{CE} = V_{CEOmax}; V_{BE} = 0$			-0.2	mA
I_{CEO}	Collector Cutoff Current	BDT32/A	$V_{CE} = -30\text{V}; I_B = 0$			-0.1	mA
		BDT 32B/C	$V_{CE} = -60\text{V}; I_B = 0$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-0.2	mA
h_{FE-1}	DC Current Gain		$I_C = -1\text{A}; V_{CE} = -4\text{V}$	25			
h_{FE-2}	DC Current Gain		$I_C = -3\text{A}; V_{CE} = -4\text{V}$	10		50	
f_T	Current-Gain—Bandwidth Product		$I_C = -0.5\text{A}; V_{CE} = -10\text{V}$	3			MHz

Switching Times

t_{on}	Turn-On Time	$I_C = -1.0\text{A}; I_{B1} = -I_{B2} = -0.1\text{A}$		0.3		μs
t_{off}	Turn-Off Time			1.0		μs