

isc Silicon NPN Power Transistors

BD751B/751C

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min})$ - BD751B
= $130V(\text{Min})$ - BD751C
- High Power Dissipation
- Complement to Type BD750B/750C

APPLICATIONS

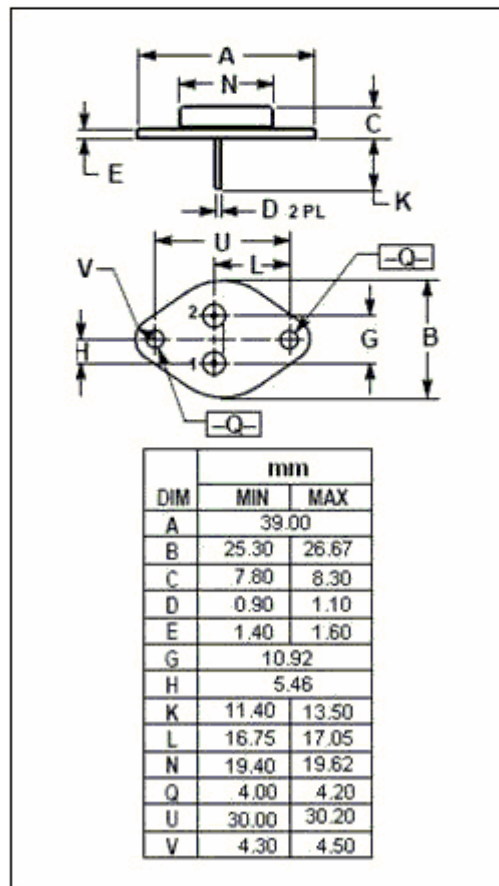
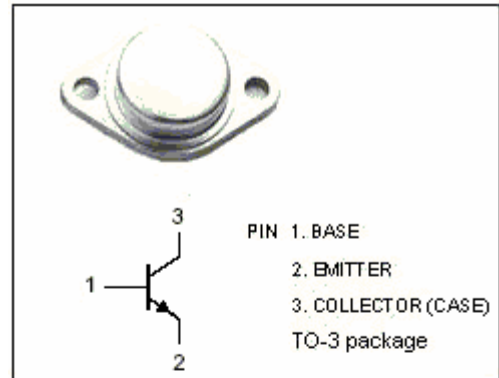
- Designed for high voltage and high power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CEV}	Collector-Emitter Voltage	BD751B	110	V
		BD751C	140	
$V_{CEO(SUS)}$	Collector-Emitter Voltage	BD751B	100	V
		BD751C	130	
V_{EBO}	Emitter-Base Voltage	7	V	
I_C	Collector Current-Continuous	20	A	
I_B	Base Current-Continuous	5	A	
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	250	W	
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.875	$^\circ\text{C/W}$



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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	BD751B	$I_C=100\text{mA}; I_B=0$			V
		BD751C				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BD751B	$I_C=7.5\text{A}; I_B=0.75\text{A}$		1.5	V
		BD751C			$I_C=5\text{A}; I_B=0.5\text{A}$	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BD751B	$I_C=7.5\text{A}; I_B=0.75\text{A}$		1.8	V
		BD751C			$I_C=5\text{A}; I_B=0.5\text{A}$	
I_{CEV}	Collector Cutoff Current	BD751B	$V_{CEV}=110\text{V}; V_{BE(off)}=1.5\text{V}$		0.5	mA
		BD751C			$V_{CEV}=140\text{V}; V_{BE(off)}=1.5\text{V}$	
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			1.0	mA
h_{FE}	DC Current Gain	BD751B	$I_C=7.5\text{A}; V_{CE}=2\text{V}$		60	
		BD751C			$I_C=5\text{A}; V_{CE}=2\text{V}$	
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f_{test}=1\text{MHz}$		4		MHz