

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

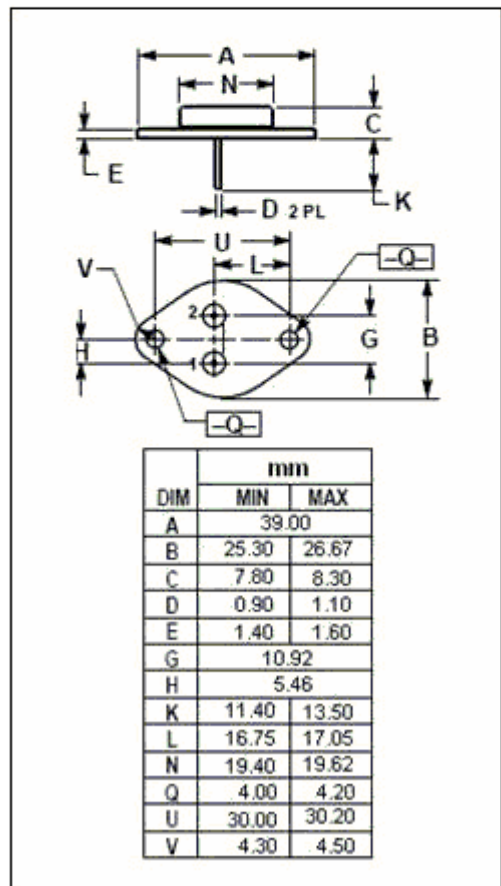
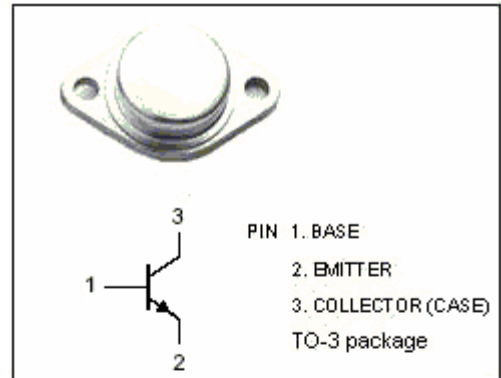
- Designed for high voltage and high power amplifier applications.

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	$^\circ\text{C}/\text{W}$



## isc Silicon NPN Power Transistors

## BD751B/751C

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{\text{CEO(SUS)}}$	Collector-Emitter Sustaining Voltage	BD751B	$I_C=100\text{mA}; I_B=0$	100			V
		BD751C		130			
$V_{\text{CE(sat)}}$	Collector-Emitter Saturation Voltage	BD751B	$I_C=7.5\text{A}; I_B=0.75\text{A}$			1.5	V
		BD751C	$I_C=5\text{A}; I_B=0.5\text{A}$			1.0	
$V_{\text{BE(sat)}}$	Base-Emitter Saturation Voltage	BD751B	$I_C=7.5\text{A}; I_B=0.75\text{A}$			1.8	V
		BD751C	$I_C=5\text{A}; I_B=0.5\text{A}$			1.8	
$I_{\text{CEV}}$	Collector Cutoff Current	BD751B	$V_{\text{CEV}}=110\text{V}; V_{\text{BE(off)}}=1.5\text{V}$			0.5	mA
		BD751C	$V_{\text{CEV}}=140\text{V}; V_{\text{BE(off)}}=1.5\text{V}$			0.5	
$I_{\text{EBO}}$	Emitter Cutoff Current		$V_{\text{EB}}=7\text{V}; I_C=0$			1.0	mA
$h_{\text{FE}}$	DC Current Gain	BD751B	$I_C=7.5\text{A}; V_{\text{CE}}=2\text{V}$	15		60	
		BD751C	$I_C=5\text{A}; V_{\text{CE}}=2\text{V}$	25		100	
$f_{\text{T}}$	Current-Gain—Bandwidth Product		$I_C=0.5\text{A}; V_{\text{CE}}=10\text{V}; f_{\text{test}}=1\text{MHz}$	4			MHz