

# isc Silicon PNP Power Transistors

# BD750/750A

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CE(SUS)} = -90V(\text{Min})$ - BD750  
=  $-120V(\text{Min})$ - BD750A
- High Power Dissipation
- Complement to Type BD751/751A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

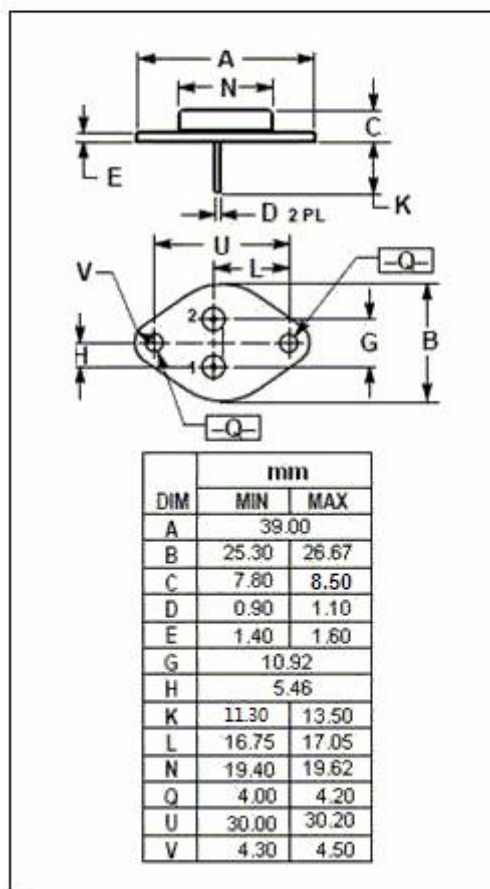
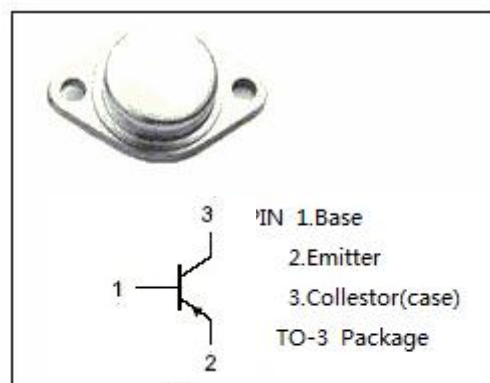
- Designed for high voltage and high power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CEV}$	Collector-Emitter Voltage	BD750	-100	V
		BD750A	-130	
$V_{CE(SUS)}$	Collector-Emitter Voltage	BD750	-90	V
		BD750A	-120	
$V_{EBO}$	Emitter-Base Voltage	-7	V	
$I_C$	Collector Current-Continuous	-20	A	
$I_B$	Base Current-Continuous	-5	A	
$P_C$	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	200	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	$^\circ\text{C/W}$



**isc Silicon PNP Power Transistors**
**BD750/750A**
**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	BD750	$I_C = -30\text{mA}; I_B = 0$			V
		BD750A		-120		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BD750	$I_C = -7.5\text{A}; I_B = -0.75\text{A}$		-1.5	V
		BD750A		$I_C = -5\text{A}; I_B = -0.5\text{A}$	-1.0	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BD750	$I_C = -7.5\text{A}; I_B = -0.75\text{A}$		-1.8	V
		BD750A		$I_C = -5\text{A}; I_B = -0.5\text{A}$	-1.8	
$I_{CEV}$	Collector Cutoff Current	BD750	$V_{CEV} = -100\text{V}; V_{BE(off)} = -1.5\text{V}$		-0.5	mA
		BD750A		$V_{CEV} = -130\text{V}; V_{BE(off)} = -1.5\text{V}$	-0.5	
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -7\text{V}; I_C = 0$			-1.0	mA
$h_{FE}$	DC Current Gain	BD750	$I_C = -7.5\text{A}; V_{CE} = -2\text{V}$	15	60	
		BD750A		$I_C = -5\text{A}; V_{CE} = -2\text{V}$	25	
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}; f_{test} = 1\text{MHz}$	4			MHz

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