

isc Silicon PNP Power Transistor

BDV92/94/96

DESCRIPTION

- Collector Current -I_C= -10A
- Collector-Emitter Sustaining Voltage-
: V_{CEO(SUS)} = -45V(Min)- BDV92; -60V(Min)- BDV94
-80V(Min)- BDV96
- Complement to Type BDV91/93/95

APPLICATIONS

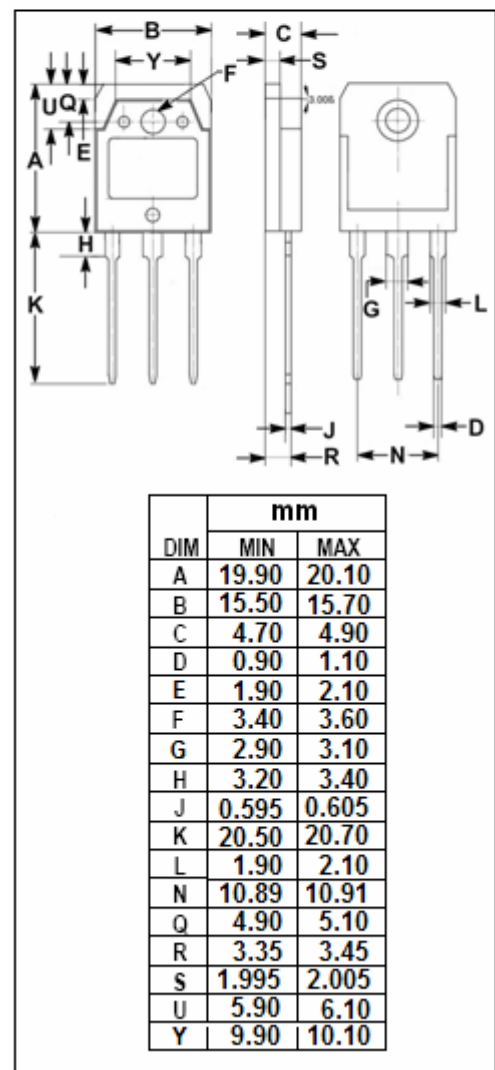
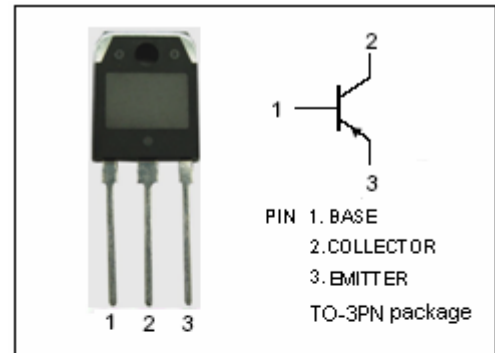
- Designed for use in audio output stages and general amplifier and switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CER}	Collector-Emitter Voltage	BDV92	-60	V
		BDV94	-80	
		BDV96	-100	
V_{CEO}	Collector-Emitter Voltage	BDV92	-60	V
		BDV94	-80	
		BDV96	-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		-7	A
I_{E}	Emitter Current		-14	A
P_{C}	Collector Power Dissipation @ $T_{\text{C}}=25^{\circ}\text{C}$		100	W
T_{J}	Junction Temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range		-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.25	°C/W



isc Silicon NPN Power Transistor

BDV91/93/95

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	BDV92	$I_C = -100\text{mA}$; $I_B = 0$	-60			V
		BDV94		-80			
		BDV96		-100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C = -4\text{A}$; $I_B = -0.4\text{A}$			-1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C = -10\text{A}$; $I_B = -3.3\text{A}$			-3.0	V
$V_{BE(sat)}$	Base -Emitter Saturation Voltage		$I_C = -4\text{A}$; $I_B = -0.4\text{A}$			-1.6	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -4\text{A}$; $V_{CE} = -4\text{V}$			-1.6	V
I_{CEO}	Collector Cutoff Current		$V_{CE} = V_{CEOmax}$; $I_B = 0$			-0.2	mA
I_{CBO}	Collector Cutoff Current		$V_{CB} = V_{CB0max}$; $I_E = 0$ $V_{CB} = \frac{1}{2}V_{CB0max}$; $I_E = 0$; $T_J = 150^{\circ}\text{C}$			-0.1 -1.0	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -7\text{V}$; $I_C = 0$			-0.1	mA
h_{FE-1}	DC Current Gain		$I_C = -4\text{A}$; $V_{CE} = -4\text{V}$	20			
h_{FE-2}	DC Current Gain		$I_C = -10\text{A}$; $V_{CE} = -4\text{V}$	5			
f_T	Current-Gain—Bandwidth Product		$I_C = -0.5\text{A}$; $V_{CE} = -10\text{V}$	4			MHz

Switching times

t_{on}	Turn-on Time	$I_C = -4\text{A}$; $I_{B1} = -I_{B2} = -0.4\text{A}$; $V_{CC} = -30\text{V}$		0.3		μS
t_{off}	Turn-off Time			0.7		μS
t_f	Fall Time			0.3		μS