

isc Silicon PNP Darlington Power Transistor

BDV66/A/B/C

DESCRIPTION

- Collector Current $-I_C = -16A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = -2.0V(Max.) @ I_C = -10A$
- Complement to Type BDV67/A/B/C

APPLICATIONS

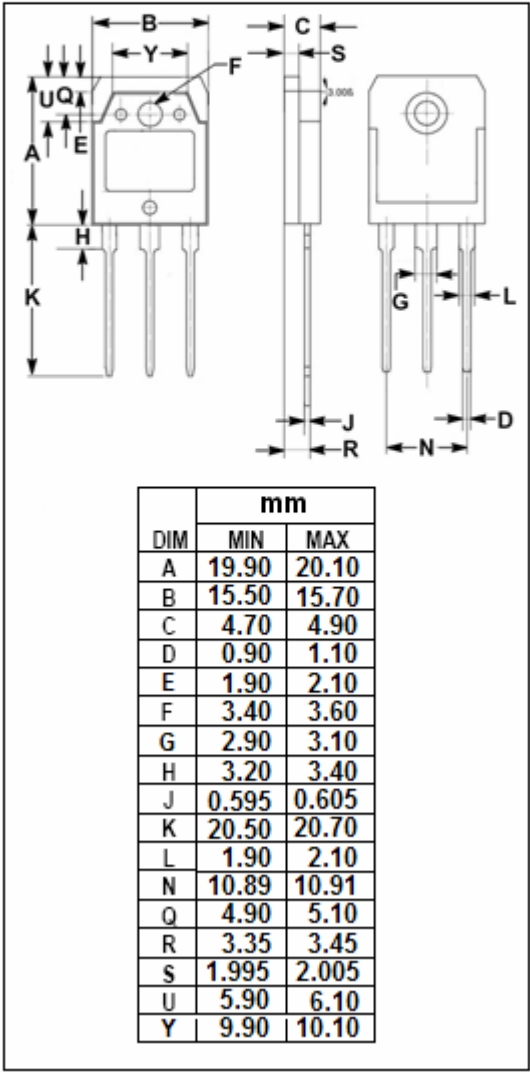
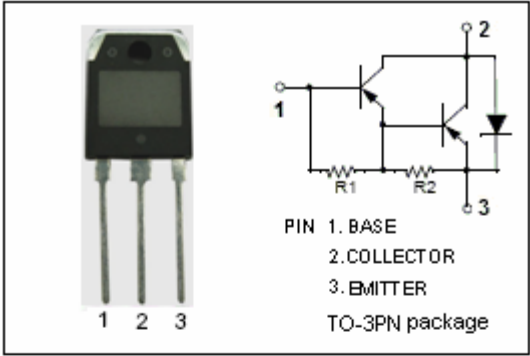
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDV66	-80	V
		BDV66A	-100	
		BDV66B	-120	
		BDV66C	-140	
V_{CEO}	Collector-Emitter Voltage	BDV66	-60	V
		BDV66A	-80	
		BDV66B	-100	
		BDV66C	-120	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current-Continuous		-16	A
I_{CM}	Collector Current-Peak		-20	A
I_B	Base Current-Continuous		-0.5	A
P_C	Collector Power Dissipation @ $T_C = 25^{\circ}C$		175	W
T_J	Junction Temperature		150	$^{\circ}C$
T_{stg}	Storage Temperature Range		-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.625	$^{\circ}C/W$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	BDV66	$I_C = -100\text{mA}; I_B = 0$	-60			V
		BDV66A		-80			
		BDV66B		-100			
		BDV66C		-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = -10\text{A}; I_B = -40\text{mA}$			-2	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = -10\text{A}; V_{CE} = -3\text{V}$			-2.5	V
I_{CEO}	Collector Cutoff Current		$V_{CE} = \frac{1}{2}V_{CE0max}; I_B = 0$			-1	mA
I_{CBO}	Collector Cutoff Current	BDV66	$V_{CB} = -40\text{V}; I_E = 0; T_J = 150^{\circ}\text{C}$			-5	mA
		BDV66A	$V_{CB} = -50\text{V}; I_E = 0; T_J = 150^{\circ}\text{C}$				
		BDV66B	$V_{CB} = -60\text{V}; I_E = 0; T_J = 150^{\circ}\text{C}$				
		BDV66C	$V_{CB} = -70\text{V}; I_E = 0; T_J = 150^{\circ}\text{C}$				
I_{CBO}	Collector Cutoff Current		$V_{CB} = V_{CBOmax}; I_E = 0$			-1	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-5	mA
h_{FE}	DC Current Gain		$I_C = -10\text{A}; V_{CE} = -3\text{V}$	1000			
C_{OB}	Output Capacitance		$I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1\text{MHz}$		300		pF

Switching times

t_{on}	Turn-on Time	$I_C = -10\text{A}; I_{B1} = -I_{B2} = -40\text{mA}; V_{CC} = 12\text{V}$		1		μs
t_{off}	Turn-off Time			3.5		μs