

Silicon PNP Darlington Power Transistor

BDV66/A/B/C

DESCRIPTION

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

APPLICATIONS

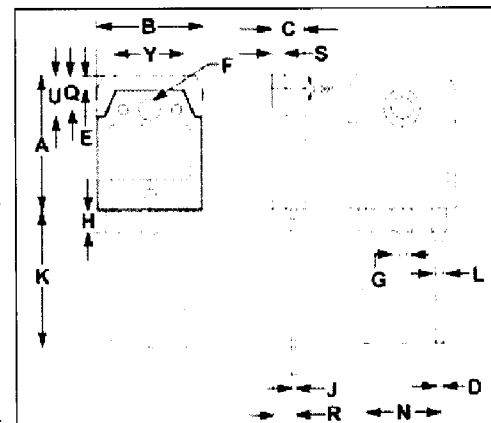
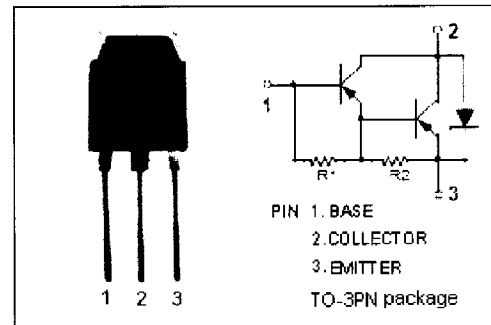
- Designed for audio output stages and general amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDV66	-80
		BDV66A	-100
		BDV66B	-120
		BDV66C	-140
V_{CEO}	Collector-Emitter Voltage	BDV66	-60
		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	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	BDV66	-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	$V_{CB} = V_{CB0max}; I_E = 0$			-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