

Silicon NPN Power Transistors

BDV67/67A/67B/67C/67D

DESCRIPTION

- With TO-3PN package
- Complement to type BDV66/66A/66B/66C/66D
- DARLINGTON
- High DC current gain

APPLICATIONS

- For use in audio output stages and general amplifier and switching applications.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

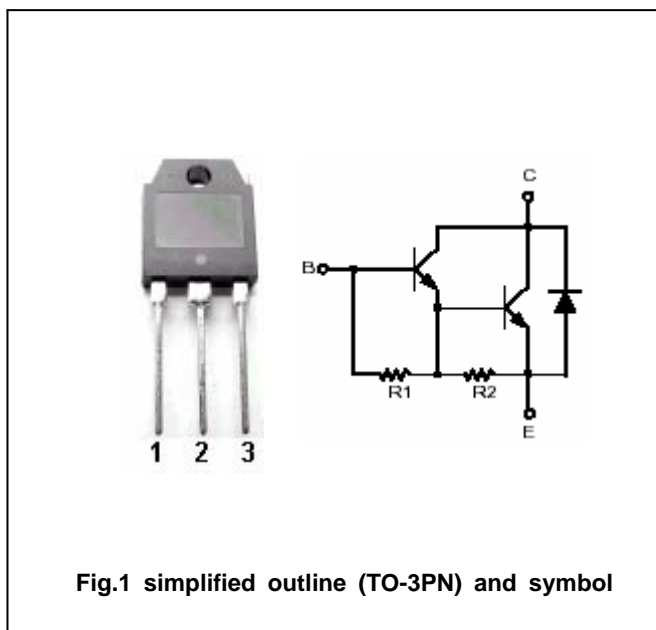


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Tc=25 )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	BDV67	80	V
			BDV67A	100	
			BDV67B	120	
			BDV67C	140	
			BDV67D	160	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	BDV67	60	V
			BDV67A	80	
			BDV67B	100	
			BDV67C	120	
			BDV67D	150	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V	
I <sub>C</sub>	Collector current		16	A	
I <sub>CM</sub>	Collector current-peak		20	A	
I <sub>B</sub>	Base current		0.5	A	
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	200	W	
T <sub>j</sub>	Junction temperature		150		
T <sub>stg</sub>	Storage temperature		-65~150		

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =30mA, I <sub>B</sub> =0	BDV67	60			V
			BDV67A	80			
			BDV67B	100			
			BDV67C	120			
			BDV67D	150			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A, I <sub>B</sub> =40mA			2.0	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =10A; V <sub>CE</sub> =3V			2.5	V	
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =V <sub>CB0max</sub> , I <sub>E</sub> =0 V <sub>CB</sub> =1/2V <sub>CB0max</sub> ; T <sub>j</sub> =150			1.0 4.0	mA	
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =1/2V <sub>CE0max</sub> , I <sub>B</sub> =0			1	mA	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			5	mA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =3V		3000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =10A; V <sub>CE</sub> =3V	1000				
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =16A; V <sub>CE</sub> =3V		1000			
C <sub>C</sub>	Collector capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz		300		pF	
V <sub>F</sub>	Diode forward voltage	I <sub>E</sub> =10A			3.0	V	
t <sub>on</sub>	Turn-on time	I <sub>C</sub> = 10 A, I <sub>B1</sub> = -I <sub>B2</sub> =40 mA V <sub>CC</sub> = 12V		1.0		μs	
t <sub>off</sub>	Turn-off time			3.5		μs	

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-mb</sub>	Thermal resistance junction to mounting base	0.625	K/W

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PACKAGE OUTLINE

