

BDW24/A/B/C

Hammer Drivers, Audio Amplifiers Applications

- Power Darlington TR
- Complement to BDW23, BDW23A, BDW23B and BDW23C respectively



1.Base 2.Collector 3.Emitter

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage		
	: BDW24	- 45	V
	: BDW24A	- 60	V
	: BDW24B	- 80	V
	: BDW24C	- 100	V
V _{CEO}	Collector-Emitter Voltage		
	: BDW24	- 45	V
	: BDW24A	- 60	V
	: BDW24B	- 80	V
	: BDW24C	- 100	V
V _{EBO}	Emitter-Base Voltage	- 5	V
I _C	Collector Current (DC)	- 6	А
I _{CP}	*Collector Current (Pulse)	- 8	А
I _B	Base Current	- 0.2	А
P _C	Collector Dissipation (T _C =25°C)	50	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 65 ~ 150	°C

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Electrical	Characteristics	T _C =25°C unless otherwise noted
Electrical	Character istics	I ~=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
V _{CEO} (sus)	* Collector-Emitter Sustaining Voltage					
	: BDW24	$I_C = -100 \text{mA}, I_B = 0$	- 45			V
	: BDW24A		- 60			V
	: BDW24B		- 80			V
	: BDW24C		- 100			V
I _{CBO}	Collector Cut-off Current					
	: BDW24	$V_{CB} = -45V, I_{E} = 0$			- 200	μΑ
	: BDW24A	$V_{CB} = -60V, I_{E} = 0$			- 200	μΑ
	: BDW24B	$V_{CB} = -80V, I_{E} = 0$			- 200	μΑ
	: BDW24C	$V_{CB} = -100V, I_{E} = 0$			- 200	μΑ
I _{CEO}	Collector Cut-off Current					
	: BDW24	$V_{CE} = -22V, I_{B} = 0$			- 500	μΑ
	: BDW24A	$V_{CE} = -30V, I_{B} = 0$			- 500	μΑ
	: BDW24B	$V_{CE} = -40V, I_{B} = 0$			- 500	μΑ
	: BDW24C	$V_{CE} = -50V, I_{B} = 0$			- 500	μΑ
I _{EBO}	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$			- 2	mA
h _{FE}	* DC Current Gain	$V_{CE} = -3V, I_{C} = -1A$	1000			
		$V_{CE} = -3V, I_{C} = -2A$	750		20000	
		$V_{CE} = -3V, I_{C} = -6A$	100			
V _{CE} (sat)	* Collector-Emitter Saturation Voltage	I _C = - 2A, I _B = - 8mA			- 2	V
		$I_C = -6A$, $I_B = -60mA$			- 3	V
V _{BE} (sat)	* Base-Emitter Saturation Voltage	$I_C = -2A$, $I_B = -8mA$			- 2.5	V
V _{BE} (on)	* Base-Emitter ON Voltage	$V_{CE} = -3V, I_{C} = -1A$			- 2.5	V
		$V_{CE} = -3V, I_{C} = -6A$			- 3	V
V _F	* Parallel Diode Forward Voltage	I _F = - 2A	_	_	- 1.8	V

^{*} Pulse Test: PW=300μs, duty Cycle =1.5% Pulsed

Typical Characteristics

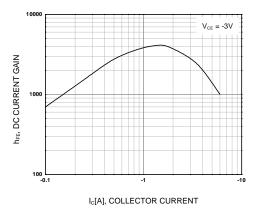


Figure 1. DC current Gain

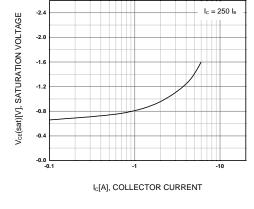


Figure 2. Collector-Emitter Saturation Voltage

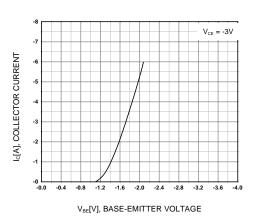


Figure 3. Base-Emitter On Voltage

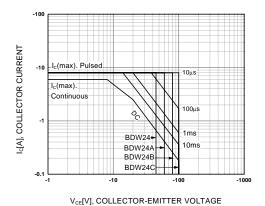


Figure 4. Safe Operating Area

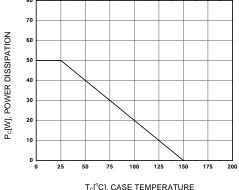


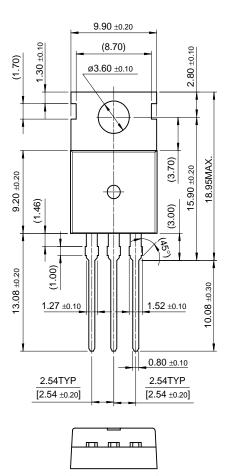
Figure 5. Power Derating

 $\mathsf{T}_{c}[^{\circ}C],\,\mathsf{CASE}\,\,\mathsf{TEMPERATURE}$

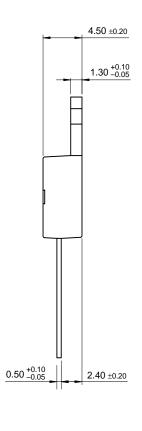
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Package Demensions

TO-220



10.00 ±0.20



Dimensions in Millimeters

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