

Silicon PNP Darlington Power Transistor

BDW24/A/B/C

DESCRIPTION

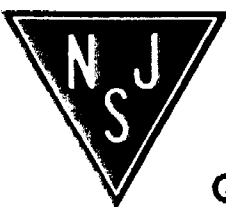
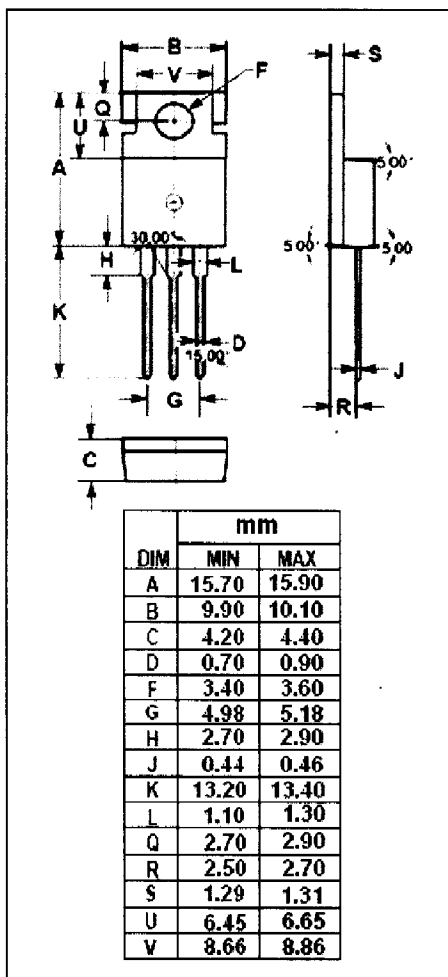
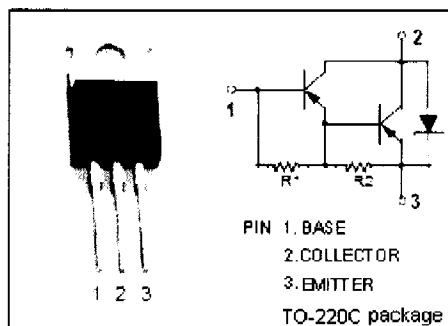
- Collector Current $I_C = -6A$
- High DC Current Gain $h_{FE} = 750(\text{Min}) @ I_C = -2A$
- Complement to Type BDW23/A/B/C

APPLICATIONS

- Designed for hammer drivers, audio amplifiers applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CER}	Collector-Emitter Voltage	BDW24	-45	V
		BDW24A	-60	
		BDW24B	-80	
		BDW24C	-100	
V_{CEO}	Collector-Emitter Voltage	BDW24	-45	V
		BDW24A	-60	
		BDW24B	-80	
		BDW24C	-100	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-6	A	
I_{CM}	Collector Current-Peak	-8	A	
I_B	Base Current-Continuous	-0.2	A	
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	50	W	
T_J	Junction Temperature	150	$^\circ C$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$	



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

Silicon PNP Darlington Power Transistor

BDW24/A/B/C

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BDW24	-45			V	
		BDW24A	-60				
		BDW24B	-80				
		BDW24C	-100				
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -2A; I_B = -8mA$			-2	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -6A; I_B = -60mA$			-3	V	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2A; I_B = -8mA$			-2.5	V	
$V_{BE(on)-1}$	Base-Emitter On Voltage	$I_C = -1A; V_{CE} = -3V$			-2.5	V	
$V_{BE(on)-2}$	Base-Emitter On Voltage	$I_C = -6A; V_{CE} = -3V$			-3	V	
V_{ECF}	C-E Diode Forward Voltage	$I_F = -2A$			-1.8	V	
I_{CEO}	Collector Cutoff Current	BDW24	$V_{CE} = -22V; I_B = 0$			-0.5	mA
		BDW24A	$V_{CE} = -30V; I_B = 0$				
		BDW24B	$V_{CE} = -40V; I_B = 0$				
		BDW24C	$V_{CE} = -50V; I_B = 0$				
I_{CBO}	Collector Cutoff Current	BDW24	$V_{CB} = -45V; I_E = 0$			-0.2	mA
		BDW24A	$V_{CB} = -60V; I_E = 0$				
		BDW24B	$V_{CB} = -80V; I_E = 0$				
		BDW24C	$V_{CB} = -100V; I_E = 0$				
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-2	mA	
h_{FE-1}	DC Current Gain	$I_C = -1A; V_{CE} = -3V$	1000				
h_{FE-2}	DC Current Gain	$I_C = -2A; V_{CE} = -3V$	750		20000		
h_{FE-3}	DC Current Gain	$I_C = -6A; V_{CE} = -3V$	100				