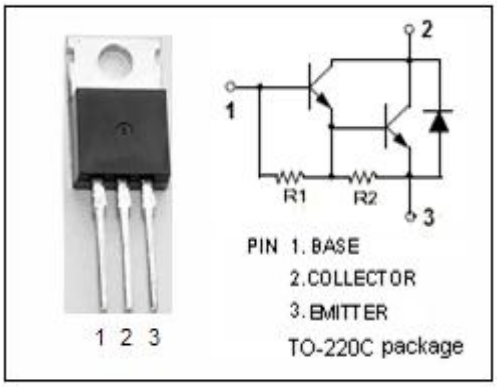
isc Silicon NPN Darlington Power Transistor BDW23/A/B/C

DESCRIPTION

- Collector Current -I_C= 6A
- High DC Current Gain-h_{FE}= 750(Min)@ I_C= 2A
- Complement to Type BDW24/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

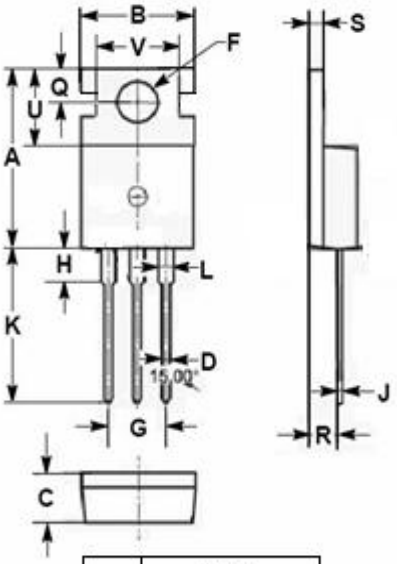


APPLICATIONS

- Designed for hammer drivers, audio amplifiers applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CER}	Collector-Emitter Voltage	BDW23	45	V
		BDW23A	60	
		BDW23B	80	
		BDW23C	100	
V_{CEO}	Collector-Emitter Voltage	BDW23	45	V
		BDW23A	60	
		BDW23B	80	
		BDW23C	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℃		50	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BDW23	I_C= 50mA ;I_B=0	45			V
		BDW23A		60			
		BDW23B		80			
		BDW23C		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	BDW23	V_{CE}= 30V; I_B= 0			0.5	mA
		BDW23A	V_{CE}= 30V; I_B= 0				
		BDW23B	V_{CE}= 40V; I_B= 0				
		BDW23C	V_{CE}= 50V; I_B= 0				
I_{CBO}	Collector Cutoff Current	BDW23	V_{CB}= 45V;I_E= 0			0.2	mA
		BDW23A	V_{CB}= 60V;I_E= 0				
		BDW23B	V_{CB}= 80V;I_E= 0				
		BDW23C	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			