

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

DESCRIPTION

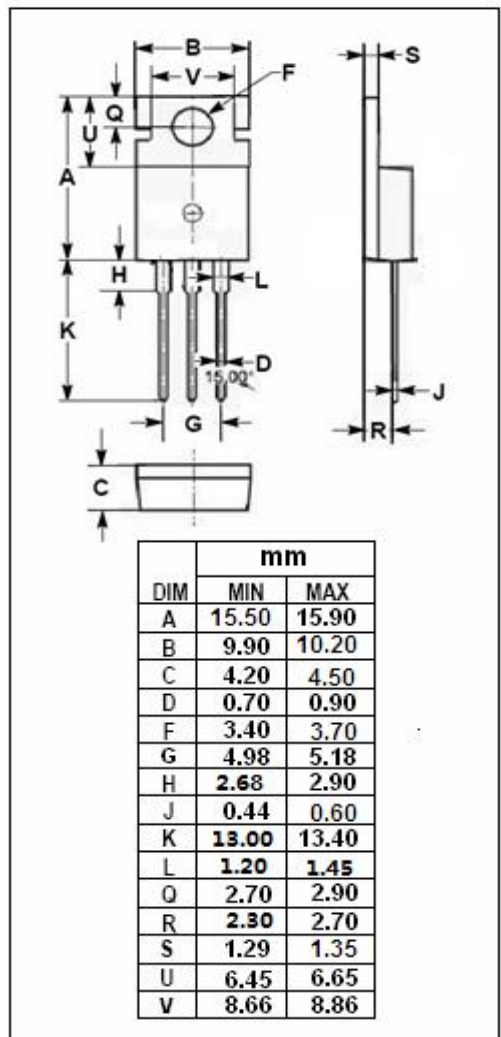
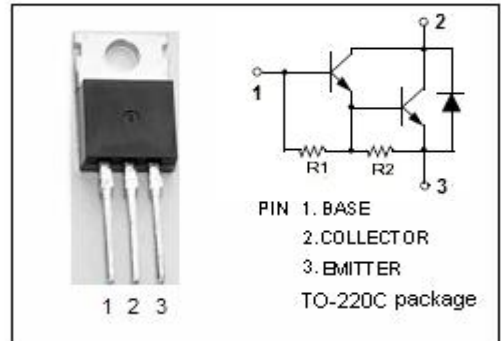
- Collector Current $-I_C = 6A$
- High DC Current Gain $-h_{FE} = 750(\text{Min}) @ I_C = 2A$
- Complement to Type BDW24/A/B/C

APPLICATIONS

- Designed for hammer drivers, audio amplifiers applications

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

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°C		50	W
T _J	Junction Temperature		150	°C
T _{stg}	Storage Temperature Range		-65~150	°C



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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	BDW23	$I_C = 50\text{mA}; I_B = 0$	45			V
		BDW23A		60			
		BDW23B		80			
		BDW23C		100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C = 2\text{A}; I_B = 8\text{mA}$			2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C = 6\text{A}; I_B = 60\text{mA}$			3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C = 2\text{A}; I_B = 8\text{mA}$			2.5	V
$V_{BE(on)-1}$	Base-Emitter On Voltage		$I_C = 1\text{A}; V_{CE} = 3\text{V}$			2.5	V
$V_{BE(on)-2}$	Base-Emitter On Voltage		$I_C = 6\text{A}; V_{CE} = 3\text{V}$			3	V
V_{ECF}	C-E Diode Forward Voltage		$I_F = 2\text{A}$			1.8	V
I_{CEO}	Collector Cutoff Current	BDW23	$V_{CE} = 30\text{V}; I_B = 0$			0.5	mA
		BDW23A	$V_{CE} = 30\text{V}; I_B = 0$				
		BDW23B	$V_{CE} = 40\text{V}; I_B = 0$				
		BDW23C	$V_{CE} = 50\text{V}; I_B = 0$				
I_{CBO}	Collector Cutoff Current	BDW23	$V_{CB} = 45\text{V}; I_E = 0$			0.2	mA
		BDW23A	$V_{CB} = 60\text{V}; I_E = 0$				
		BDW23B	$V_{CB} = 80\text{V}; I_E = 0$				
		BDW23C	$V_{CB} = 100\text{V}; I_E = 0$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = 5\text{V}; I_C = 0$			2	mA
h_{FE-1}	DC Current Gain		$I_C = 1\text{A}; V_{CE} = 3\text{V}$	1000			
h_{FE-2}	DC Current Gain		$I_C = 2\text{A}; V_{CE} = 3\text{V}$	750		20000	
h_{FE-3}	DC Current Gain		$I_C = 6\text{A}; V_{CE} = 3\text{V}$	100			