

INCHANGE Semiconductor

isc Product Specification

isc Silicon PNP Darlington Power Transistor

BDW24/A/B/C

DESCRIPTION

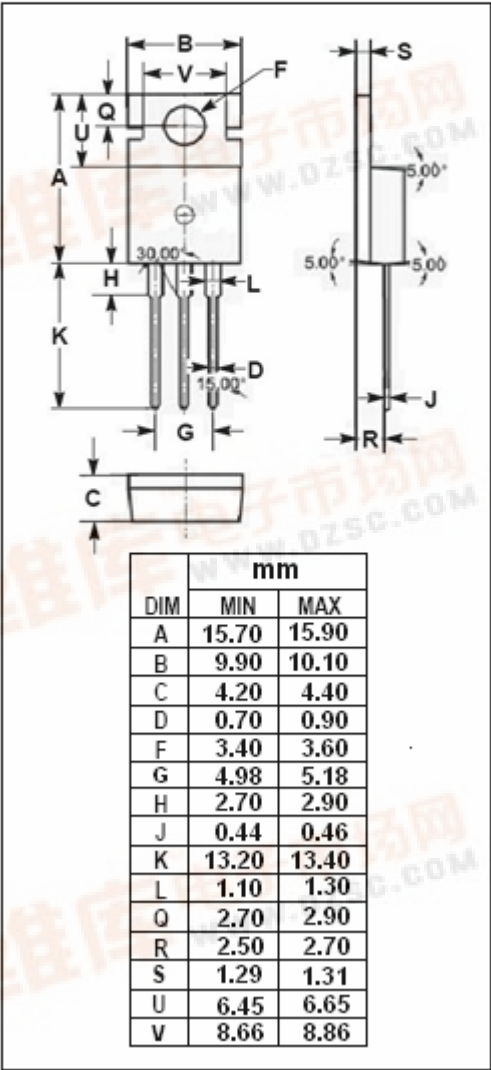
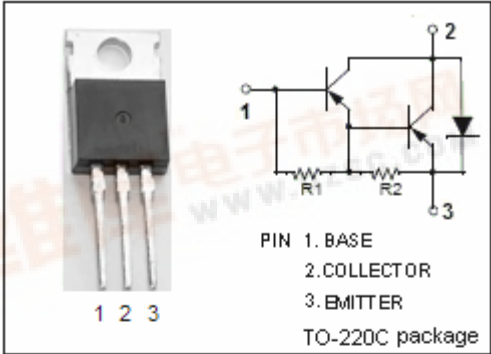
- Collector Current $-I_C = -6A$
- High DC Current Gain $-h_{FE} = 750(\text{Min}) @ I_C = -2A$
- Complement to Type BDW23/A/B/C

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	$^{\circ}C$



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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	BDW24	$I_C = -100\text{mA}; I_B = 0$	-45			V
		BDW24A		-60			
		BDW24B		-80			
		BDW24C		-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	BDW24	$V_{CE} = -22\text{V}; I_B = 0$			-0.5	mA
		BDW24A	$V_{CE} = -30\text{V}; I_B = 0$				
		BDW24B	$V_{CE} = -40\text{V}; I_B = 0$				
		BDW24C	$V_{CE} = -50\text{V}; I_B = 0$				
I_{CBO}	Collector Cutoff Current	BDW24	$V_{CB} = -45\text{V}; I_E = 0$			-0.2	mA
		BDW24A	$V_{CB} = -60\text{V}; I_E = 0$				
		BDW24B	$V_{CB} = -80\text{V}; I_E = 0$				
		BDW24C	$V_{CB} = -100\text{V}; I_E = 0$				
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			