

Silicon PNP Power Transistor

BDW94/A/B/C

DESCRIPTION

- Collector Current $-I_C = -12A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -45V(\text{Min})$ - BDW94; $-60V(\text{Min})$ - BDW94A
 $-80V(\text{Min})$ - BDW94B; $-100V(\text{Min})$ - BDW94C
- Complement to Type BDW93/A/B/C

APPLICATIONS

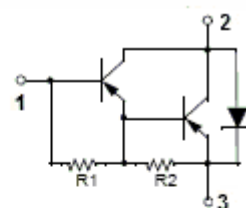
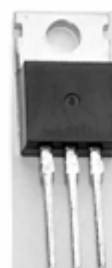
- Designed for hammer drivers, audio amplifier applications.

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

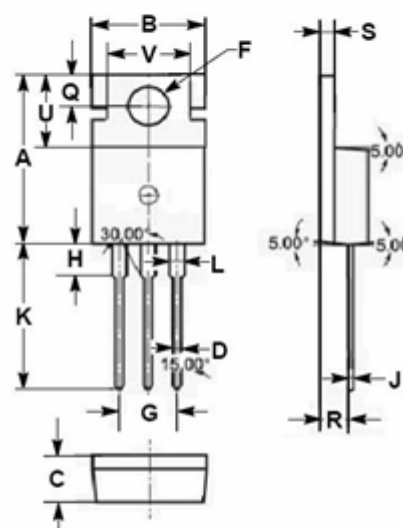
SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDW94	-45
		BDW94A	-60
		BDW94B	-80
		BDW94C	-100
V_{CEO}	Collector-Emitter Voltage	BDW94	-45
		BDW94A	-60
		BDW94B	-80
		BDW94C	-100
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-12	A
I_{CM}	Collector Current-Peak	-15	A
I_B	Base Current	-0.2	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C/W}$



PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDW94	$I_C = -100\text{mA}; I_B = 0$	-45			V
		BDW94A		-60			
		BDW94B		-80			
		BDW94C		-100			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C = -5\text{A}; I_B = -20\text{mA}$			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C = -10\text{A}; I_B = -0.1\text{A}$			-3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage		$I_C = -5\text{A}; I_B = -20\text{mA}$			-2.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage		$I_C = -10\text{A}; I_B = -0.1\text{A}$			-4.0	V
I_{CBO}	Collector Cutoff Current	BDW94	$V_{CB} = -45\text{V}; I_E = 0$			-0.1	mA
		BDW94A	$V_{CB} = -60\text{V}; I_E = 0$				
		BDW94B	$V_{CB} = -80\text{V}; I_E = 0$				
		BDW94C	$V_{CB} = -100\text{V}; I_E = 0$				
I_{CEO}	Collector Cutoff Current	BDW94	$V_{CE} = -45\text{V}; I_B = 0$			-1.0	mA
		BDW94A	$V_{CE} = -60\text{V}; I_B = 0$				
		BDW94B	$V_{CE} = -80\text{V}; I_B = 0$				
		BDW94C	$V_{CE} = -100\text{V}; I_B = 0$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-2.0	mA
h_{FE-1}	DC Current Gain		$I_C = -3\text{A}; V_{CE} = -3\text{V}$	1000			
h_{FE-2}	DC Current Gain		$I_C = -5\text{A}; V_{CE} = -3\text{V}$	750		20000	
h_{FE-3}	DC Current Gain		$I_C = -10\text{A}; V_{CE} = -3\text{V}$	100			
V_{ECF-1}	C-E Diode Forward Voltage		$I_F = -5\text{A}$			-2.0	V
V_{ECF-2}	C-E Diode Forward Voltage		$I_F = -10\text{A}$			-4.0	V