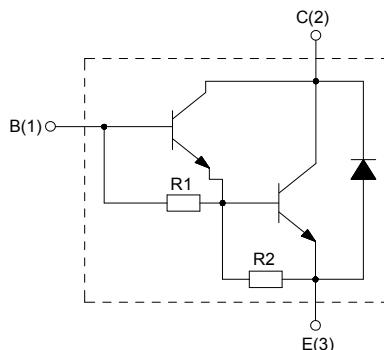


■ Features

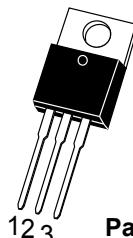
I _C	12A
V _{CEO}	100V
P _C (TO-220AB)	80W

■ Equivalent Circuit



■ DESCRIPTION

The BDW93C is a silicon NPN power transistor in monolithic darlington configuration, mounted in TO-220B and TO-220C plastic package. It is intended for use in power linear and switching applications.



Package:TO-220AB

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-65 to 150	°C
Max. operating junction temperature	T_j	150	°C
Collector-emitter voltage ($I_B=0$)	V_{CEO}	100	V
Collector-base voltage ($I_E=0$)	V_{CBO}	100	V
Emitter-base voltage ($I_C=0$)	V_{EBO}	5	V
Collector current	I_C	12	A
Collector peak current	I_{CM}	15	A
Base current	I_B	0.2	A
Total dissipation at $T_c \leq 25^\circ\text{C}$ $T_a \leq 25^\circ\text{C}$	P_{tot}	80 0.64	W



ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I_{CEO}	$I_B=0$ $V_{CE} = 100\text{V}$	-	-	0.2	mA
I_{CBO}	$I_E=0$ $V_{CB} = 100\text{V}$	-	-	0.1	mA
I_{EBO}	$I_C=0$ $V_{EB}=5\text{V}$	-	-	2	mA
$V_{CEO(\text{SUS})}^*$	$I_B=0$ $I_C=100\text{mA}$	100	-	-	V
$V_{CE(\text{sat})}^*$	$I_C=5\text{A}$ $I_B=20\text{mA}$ $I_C=10\text{A}$ $I_B=100\text{mA}$	-	-	2 3	V
V_{BE}^*	$I_C=4\text{A}$ $V_{CE}=4\text{V}$	-	-	2.5	V
h_{FE}^*	$I_C=3\text{A}$ $V_{CE}=3\text{V}$ $I_C=5\text{A}$ $V_{CE}=3\text{V}$ $I_C=10\text{A}$ $V_{CE}=3\text{V}$	1000 750 100	-	20K	
V_F^*	$I_F=5\text{A}$ $I_F=10\text{A}$		1.3 1.8	2 4	V

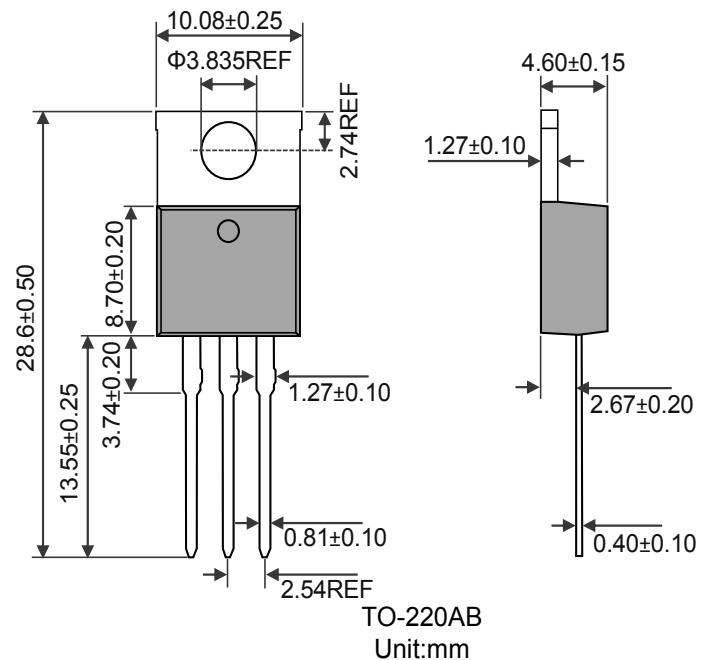
* Pulsed: pulse duration = 300 μs , duty cycle 1.5%

THERMAL RESISTANCES

Symbol	Parameter	Value (Max.)	Unit
$R_{th(j-c)}$	junction to case	2.00	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	junction to ambient	80.0	$^\circ\text{C}/\text{W}$



Package Outline Dimensions



Marking Information



“MHCHXM”= Product Logo
“Marking Code”= The Following
“XXXX”= Date Code Marking

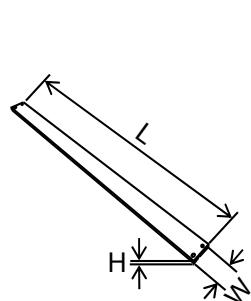
Marking Code	Part Number
BDW93C	BDW93C



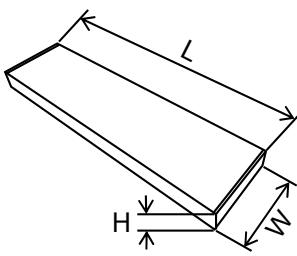
Packing Information

Packaging	Part Number	Quantity(pcs)	Size(mm)
Tube	Tube	50	L534×W33×H7
	Inner Box	1000	L560×W150×H40
	Outer Box	5000	L570×W235×H175

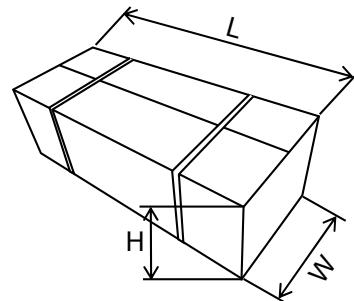
Packaging:Tube



Tube



Tube Inner Box



Tube Outer Box



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