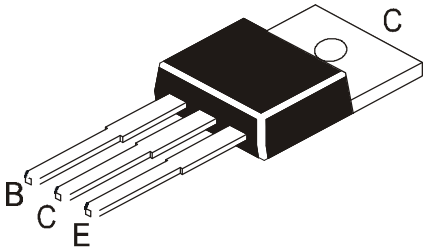
PNP SILICON PLANAR DARLINGTON POWER TRANSISTOR

BDW47

TO-220
Plastic Package



General Purpose and Low Speed Switching Application

Complementary BDW42

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	V_{CEO}	100	V
Collector-Base Voltage	V_{CBO}	100	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current Continuous	I_C	15	A
Base Current	I_B	0.5	A
Total Device Dissipation @ T_c=25ºC Derate above 25ºC	P_D	85 0.68	W W/ºC
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150	ºC

THERMAL RESISTANCE

Junction to Case	$R_{th\ (j\text{-}c)}$	1.47	ºC/W

ELECTRICAL CHARACTERISTICS (T_c=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Sustaining Voltage	*$V_{CEO\ (sus)}$	I_C=30mA, I_B=0	100		V
Collector Cutoff Current	I_{CEO}	V_{CE}=50V, I_B=0		2.0	mA
Collector Cutoff Current	I_{CBO}	V_{CB}=100V, I_E=0		1.0	mA
Emitter Cutoff Current	I_{EBO}	V_{BE}=5.0V, I_C=0		2.0	mA
DC Current Gain	*h_{FE}	I_C=5.0A, V_{CE}=4.0V I_C=10A, V_{CE}=4.0V	1000 250		
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=5.0A, I_B=10mA I_C=10A, I_B=50mA		2.0 3.0	V V
Base Emitter On Voltage	*$V_{BE\ (on)}$	I_C=10A, V_{CE}=4.0V		3.0	V

SECOND BREAKDOWN

Second Breakdown Collector Current with Base Forward Biased	**$I_{S/b}$	V_{CE} = 22.5V	3.8		A
		V_{CE} = 36V	1.2		A

DYNAMIC CHARACTERISTICS

Transition Frequency	f_T	I_C=3.0A, V_{CE}=3.0V, f=1MHz	4.0		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz		300	pF
Small-Signal Current Gain	h_{fe}	I_C=3.0A, V_{CE}=3.0V, f=1kHz	300		

*** Pulse test : Pulse Width =300ms, Duty Cycle = 2.0%**

**** Pulse test non repetitive : Pulse Width = 250 ms**

BDW47Rev140803E

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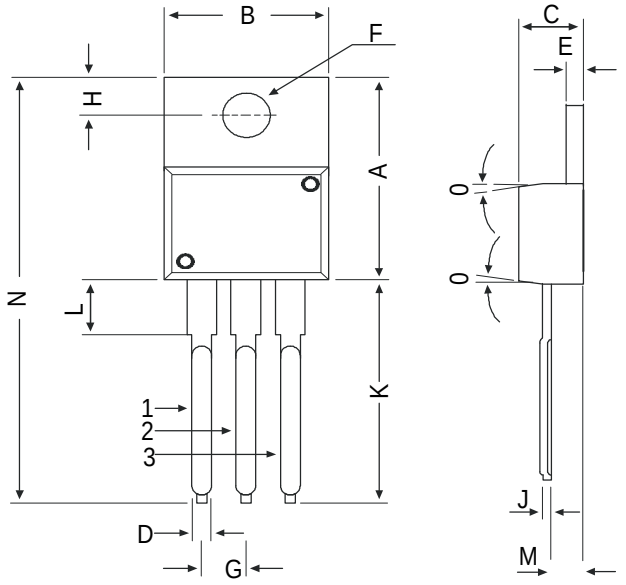
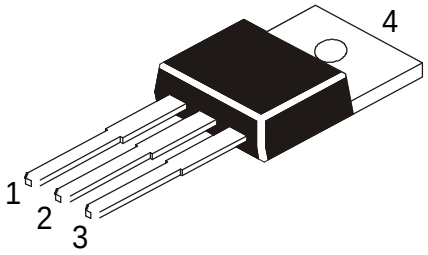


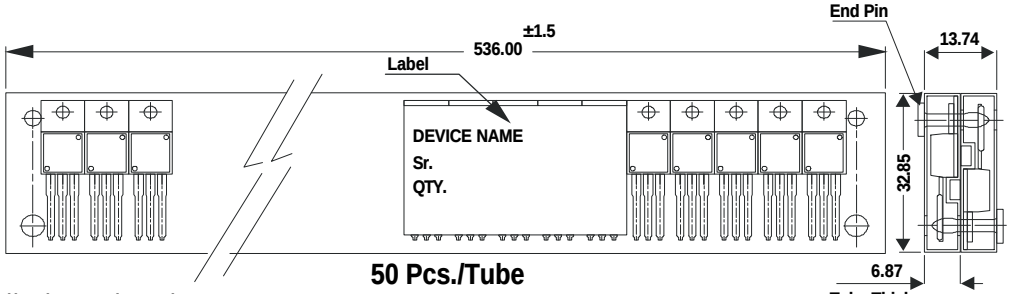
DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	—	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	—	31.24
O	7 DEG	

All diminsions in mm.



Pin Configuration
1. Base
2. Collector
3. Emitter
4. Collector

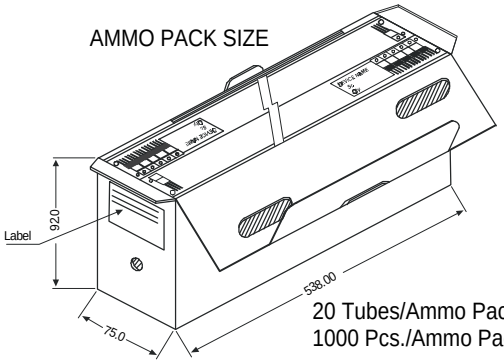
TO-220 Tube Packing



50 Pcs./Tube

All Dimensions in mm

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1.0K	17" x 15" x 13.5"	16.0K	36 kgs
	50 pcs/tube	120 gm/50 pcs	3.5" x 3.7" x 21.5"	1.0K	19" x 19" x 19"	10.0K	29 kgs

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Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com

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