



PNP BDW84C

PNP SILICON DARLINGTONS POWER TRANSISTORS

The BDW84C is silicon epitaxial-base PNP power monolithic Darlington transistor mounted in Jedec TO-218 plastic package.
It is intended for use in power linear and switching applications.
The complementary is BDW83C.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
$-V_{CEO}$	Collector-Emitter Voltage	$-I_B = 0$	100	V
$-V_{CBO}$	Collector- Emitter Voltage	$-I_E = 0$	100	V
$-V_{EBO}$	Emitter-Base Voltage	$-I_C = 0$	5	V
$-I_C$	Collector Current		15	A
$-I_{CM}$	Collector Peak Current	$t_p = 10ms$	40	A
$-I_B$	Base Current		0.5	A
P_t	Total Power Dissipation	@ $T_C = 40^\circ$	130	Watts
T_J	Junction Temperature		150	$^\circ C$
T_{Stg}	Storage Temperature		-65 to +150	$^\circ C$

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	0.96	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

$T_C = 25^\circ C$ unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$-V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (1)	$-I_C = 30\text{ mA}$	100	-	-	V
$-I_{CEO}$	Collector Cutoff Current	$-V_{CE} = 40\text{ V}$, $-I_B = 0$	-	-	1	mA
$-I_{CBO}$	Collector Cutoff Current	$-V_{CE} = 100\text{ V}$, $-I_E = 0$	-	-	0.5	mA
		$-V_{CE} = 100\text{ V}$, $-I_E = 0$, $T_{case} = 150^\circ C$	-	-	5	mA
$-I_{EBO}$	Emitter Cutoff Current	$-V_{EB} = 5.0\text{ V}$, $-I_C = 0$	-	-	2	mA
h_{FE}	DC Current Gain (1)	$-I_C = 6\text{ A}$, $-V_{CE} = 3.0\text{ V}$	750	-	20 K	-
		$-I_C = 15\text{ A}$, $-V_{CE} = 3.0\text{ V}$	100	-	-	-
$-V_{CE(SAT)}$	Collector-Emitter saturation Voltage (1)	$-I_C = 6\text{ A}$, $-I_B = 12\text{ mA}$	-	-	2.5	V
		$-I_C = 15\text{ A}$, $-I_B = 150\text{ mA}$	-	-	4	V
$-V_{BE(on)}$	Base-Emitter Voltage (1)	$-I_C = 6\text{ A}$, $-I_B = 3\text{ A}$	-	-	2.5	V
$-V_f$	Diode Forward Voltage (1)	$-I_f = 10\text{ A}$	-	-	4	V

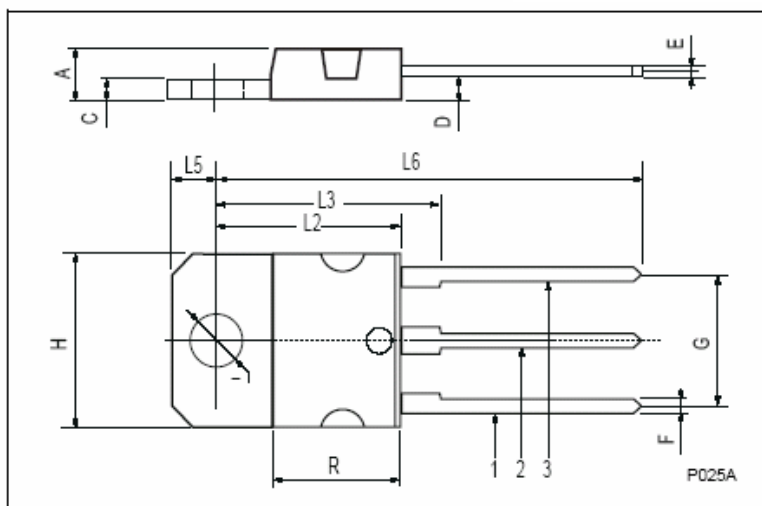
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Symbol	Ratings	Test Condition(s)Sec	Min	Typ	Mx	Unit
t_{on}	Turn-on time	$-I_C=10\text{ A}$, $-V_{CC}=30\text{ V}$	-	0.9	-	μs
t_{off}	Turn-off time	$-I_C=5\text{ A}$, $-V_{CC}=250\text{ V}$ $-I_{B1} = I_{B2} = 40\text{mA}$	-	6	-	

(1) Pulse Duration = 300 μs , Duty Cycle $\leq 1.5\%$

MECHANICAL DATA CASE TO-3P (TO-218)

DIM.	mm		
	MIN.	TYP.	MAX.
A	4.7		4.9
C	1.17		1.37
D		2.5	
E	0.5		0.78
F	1.1		1.3
G	10.8		11.1
H	14.7		15.2
L2	-		16.2
L3		18	
L5	3.95		4.15
L6		31	
R	-		12.2
$\varnothing$	4		4.1



Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter

Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.

Data are subject to change without notice.