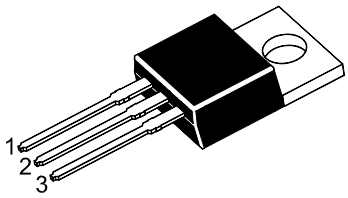
ST BDW47

PNP Silicon Planar Darlington Power Transistor

General purpose and low speed switching application



1.Base 2.Collector 3.Emitter

TO-220 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

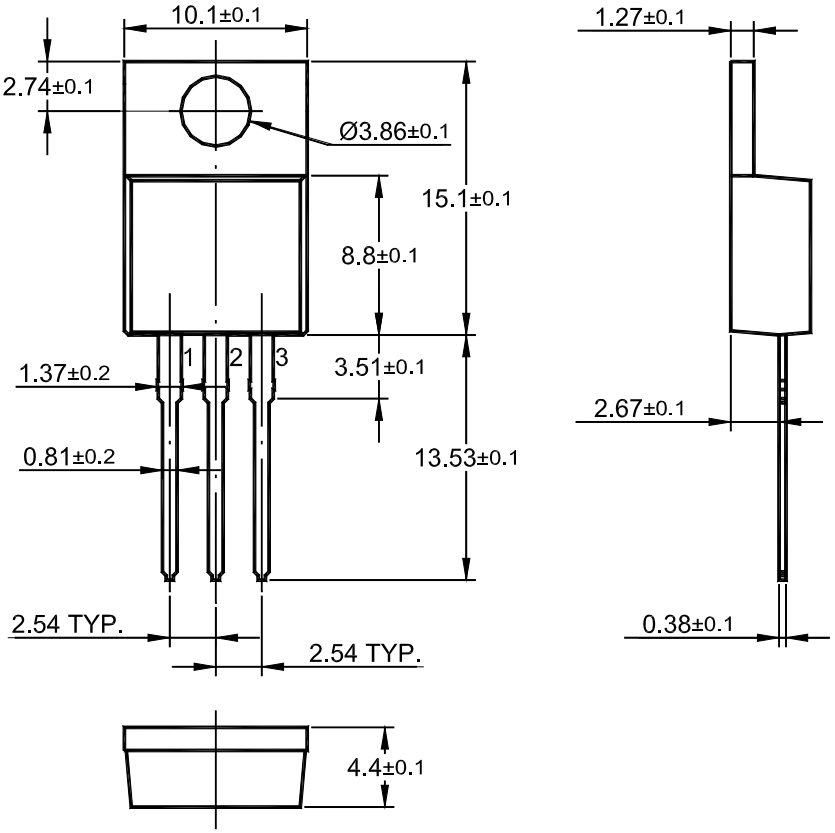
Parameter	Symbol	Value	Unit
Collector Emitter Voltage	$-V_{CEO}$	100	V
Collector Base Voltage	$-V_{CBO}$	100	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current – Continuous	$-I_C$	15	A
Base Current	$-I_B$	0.5	A
Total Power Dissipation @ T_C = 25 °C Derate above 25 °C	P_{tot}	85 0.68	W W/°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.47	°C/W
Operating and Storage Junction Temperature Range	T_J, T_s	-55 to +150	°C

Characteristics at T_C = 25 °C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-V_{CE}$ = 4 V, $-I_C$ = 5 A	h_{FE}	1000	-	-
at $-V_{CE}$ = 4 V, $-I_C$ = 10 A	h_{FE}	250	-	-
Collector Emitter Sustaining Voltage				
at $-I_C$ = 30 mA	$-V_{CEO(sus)}$	100	-	V
Collector Cutoff Current				
at $-V_{CE}$ = 50 V	$-I_{CEO}$	-	2	mA
Collector Cutoff Current				
at $-V_{CB}$ = 100 V	$-I_{CBO}$	-	1	mA
Emitter Cutoff Current				
at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	2	mA
Collector Emitter Saturation Voltage				
at $-I_C$ = 5 A, $-I_B$ = 10 mA	$-V_{CE(sat)}$	-	2	V
at $-I_C$ = 10 A, $-I_B$ = 50 mA	$-V_{CE(sat)}$	-	3	V
Base Emitter on Voltage				
at $-I_C$ = 10 A, $-V_{CE}$ = 4 V	$-V_{BE(on)}$	-	3	V
Second Breakdown Collector Current				
With Base Forward Biased [1)]				
at $-V_{CE}$ = 22.5 V	$I_{S/b}$	3.8	-	A
at $-V_{CE}$ = 36 V		1.2	-	A
Transition Frequency				
at $-V_{CE}$ = 3 V, $-I_C$ = 3 A, f = 1 MHz	f_T	4	-	MHz
Output Capacitance				
at $-V_{CB}$ = 10 V, f = 0.1 MHz	C_{ob}	-	300	pF

[1)] Pulse Test non repetitive: Pulse Width = 250 ms

TO-220 PACKAGE OUTLINE



Dimensions in mm