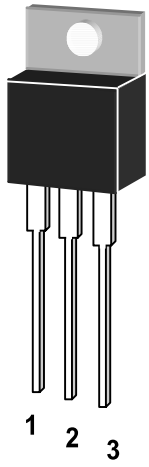
ST BDW47

PNP Silicon Planar Darl ington 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)

	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
Operating and Storage Junction Temperature Range	T_J, T_s	-55 to +150	°C
Thermal Resistance, Junction to Case	R_{YJC}	1.47	°C/W

G S P FORM A IS AVAILABLE

ST BDW47

Characteristics at Tc=25 ^{o}C

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

* Pulse Test: Pulse Width=300μs, Duty Cycle=2%.

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

G S P FORM A IS AVAILABLE