Silicon PNP Power Transistors BDW84/84A/84B/84C/84D

DESCRIPTION

·With TO-3PN package
·Complement to type BDW83/83A/83B/83C/83D
·DARLINGTON
·High DC current gain

APPLICATIONS

·For use in power linear and switching applications.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

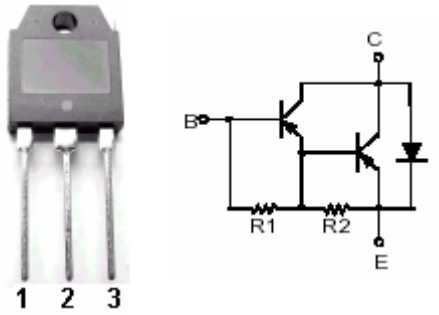

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Tc=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BDW84	Open emitter	-45	V
		BDW84A		-60	
		BDW84B		-80	
		BDW84C		-100	
		BDW84D		-120	
V_{CEO}	Collector-emitter voltage	BDW84	Open base	-45	V
		BDW84A		-60	
		BDW84B		-80	
		BDW84C		-100	
		BDW84D		-120	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current			-15	A
I_B	Base current			-0.5	A
P_C	Collector power dissipation		T_C=25□	150	W
			T_a=25□	3.5	
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-65~150	□

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BDW84	I_C=-30mA, I_B=0	-45			V
		BDW84A		-60			
		BDW84B		-80			
		BDW84C		-100			
		BDW84D		-120			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=-6A ,I_B=-12mA			-2.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=-15A ,I_B=-150mA			-4.0	V
V_{BE}	Base-emitter on voltage		I_C=-6A ; V_{CE}=-3V			-2.5	V
I_{CBO}	Collector cut-off current	BDW84	V_{CB}=-45V, I_E=0 T_C=150□			-0.5 -5.0	mA
		BDW84A	V_{CB}=-60V, I_E=0 T_C=150□			-0.5 -5.0	
		BDW84B	V_{CB}=-80V, I_E=0 T_C=150□			-0.5 -5.0	
		BDW84C	V_{CB}=-100V, I_E=0 T_C=150□			-0.5 -5.0	
		BDW84D	V_{CB}=-120V, I_E=0 T_C=150□			-0.5 -5.0	
I_{CEO}	Collector cut-off current	BDW84	V_{CE}=-30V, I_B=0			-1	mA
		BDW84A	V_{CE}=-30V, I_B=0				
		BDW84B	V_{CE}=-40V, I_B=0				
		BDW84C	V_{CE}=-50V, I_B=0				
		BDW84D	V_{CE}=-60V, I_B=0				
I_{EBO}	Emitter cut-off current		V_{EB}=-5V; I_C=0			-2	mA
h_{FE-1}	DC current gain		I_C=-6A ; V_{CE}=-3V	750		20000	
h_{FE-2}	DC current gain		I_C=-15A ; V_{CE}=-3V	100			
V_{EC}	Diode forward voltage		I_E=-15A			-3.5	V
t_{on}	Turn-on time		I_C =-10 A, I_{B1} =-I_{B2}=-40 mA R_L=3Ω; $V_{BE(off)}$ =4.2V Duty Cycle≤2%		0.9		Ms
t_{off}	Turn-off time				7.0		Ms

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	0.83	□/W

PACKAGE OUTLINE

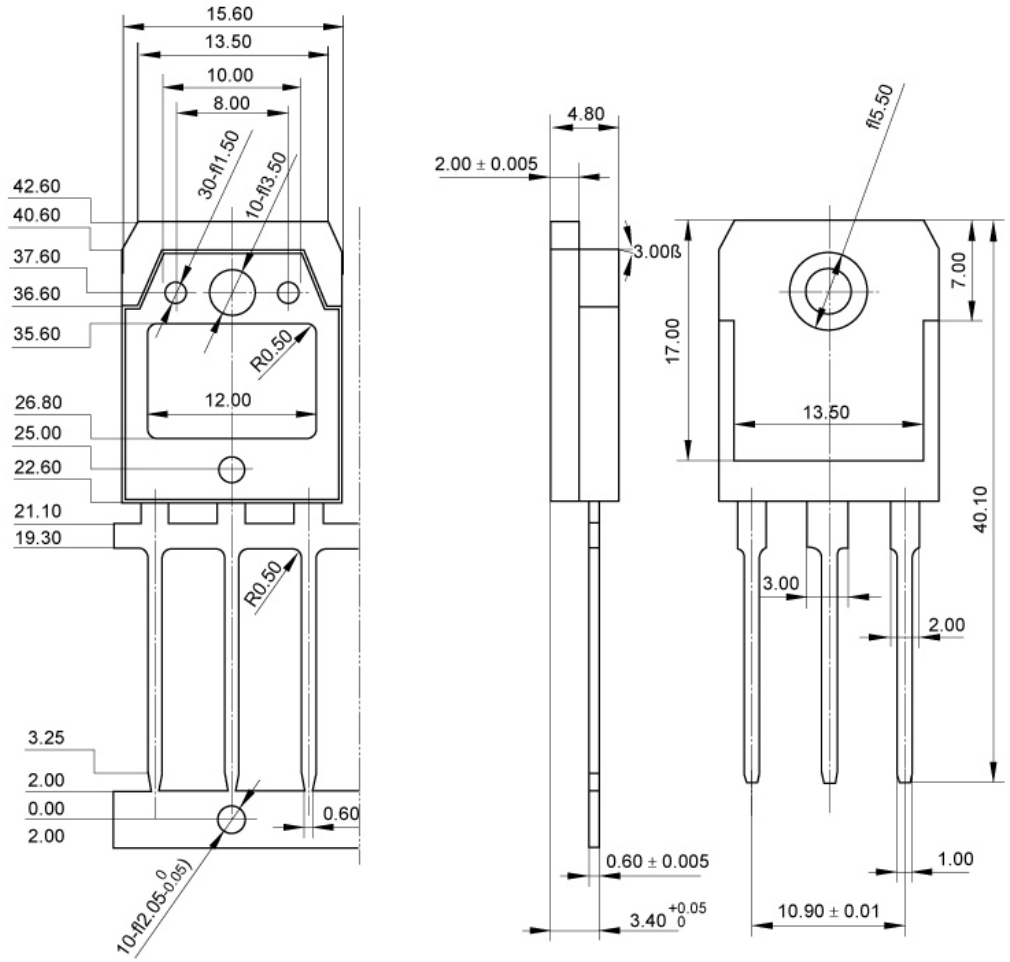

Fig.2 Outline dimensions(unindicated tolerance:±0.1mm)