



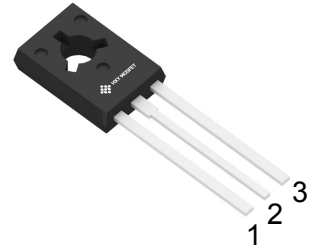
Features

- Blocking voltage to 800V
- RMS on-state current to 4A
- General purpose switching

1. ANODE

2. ANODE

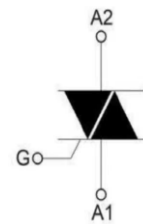
3. GATE



Package Marking and Ordering Information

Product ID	Pack	Packing Method	Qty(PCS)
BT136-800E	TO-126	Bulk	200

TO-126



Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Value	Unit
V_{DRM} / V_{RRM}	repetitive peak off-state voltage		800	V
$I_{T(RMS)}$	RMS on-state current		4	A
I_{TSM}	Non repetitive surge peak on-state current	$t = 2ms \ T_j = 25^\circ C$	40	A
		$t = 16.7ms \ T_j = 25^\circ C$	35	
$I^2 t$	$I^2 t$ for fusing	$t = 10 \ ms$	2	$A^2 s$
di/dt	Critical-rate of rise of commutation current	$I_G = 2I_{GT} \leq 100ns$ $F = 120Hz$	50 10	A/us
I_{GM}	Peak Gate Current	$T_j = 125^\circ C \ t_p = 20\mu s$	0.6	A
V_{GM}	Peak gate voltage	$T_j = 125^\circ C$	1	V
P_{GM}	Peak gate power	$T_j = 125^\circ C$	1	W
$P_{G(AV)}$	Average Gate Power Dissipation	$T_j = 125^\circ C$	0.5	W
T_j	Junction Temperature	-	-40 ~ 125	$^\circ C$
T_{stg}	Storage Temperature	-	-40 ~ 150	$^\circ C$

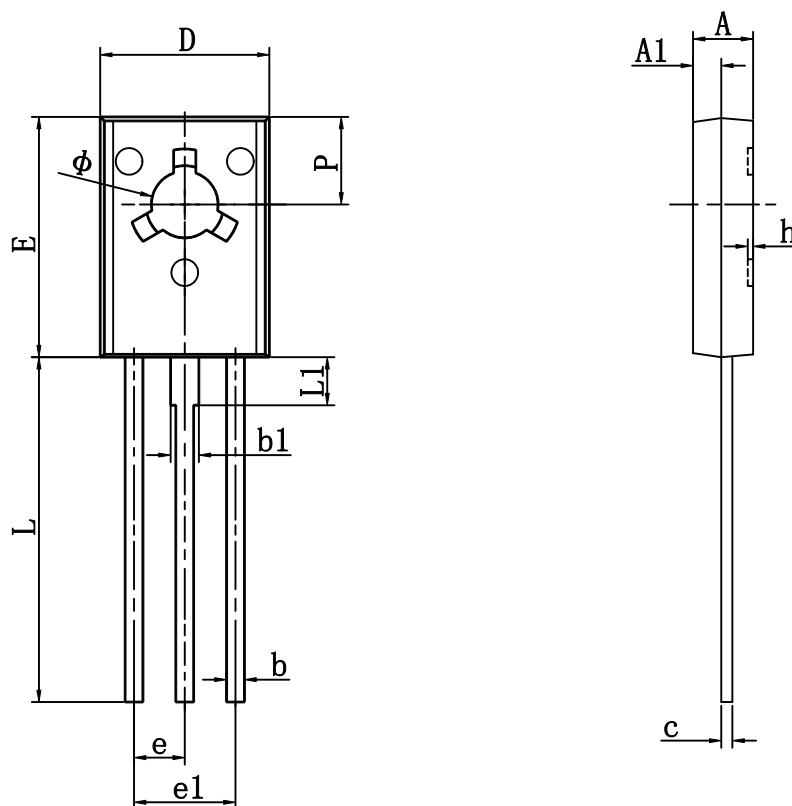


Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter		Symbol	Test conditions		Min	Typ	Max	Unit
Repetitive Peak Off-State Current Repetitive Peak Reverse Current		I_{DRM}, I_{RRM}	$V_{DRM}=V_{RRM} \quad T_j=25\text{ }^{\circ}\text{C}$				5	μA
			$V_{DRM}=V_{RRM} \quad T_j=125\text{ }^{\circ}\text{C}$				1	mA
Gate non-trigger voltage		V_{GD}	$V_D=1/2V_{DRM}$		0.2			V
On-state voltage		V_{TM}	$I_T=4\text{A}, t_p=380\mu\text{s}$				1.65	V
Gate trigger current	I	I_{GT}	$T_2(+), G(+)$	$V_D=12\text{V}$ $R_L=100\Omega$			3	mA
	II		$T_2(+), G(-)$				6	
	III		$T_2(-), G(-)$				4	
	IV		$T_2(-), G(+)$				12	
Gate trigger voltage	I	V_{GT}	$T_2(+), G(+)$	$V_D=12\text{V}$ $R_L=100\Omega$		0.8	2	V
	II		$T_2(+), G(-)$			0.8	2	
	III		$T_2(-), G(-)$			0.8	2	
	IV		$T_2(-), G(+)$			0.8	2.5	
Holding current		I_H	$V_D=12\text{V}, I_{GT}=100\text{mA}$				30	mA
Critical-rate of rise of commutation voltage		dV/dt	$V_{DM}=67\%V_{DRM}$ Gate open $T_j=125\text{ }^{\circ}\text{C}$				50	V/us
Rate of change of commutating voltage		(dI/dt) _c	$V_{DM}=400\text{V} \quad T_j=125\text{ }^{\circ}\text{C}$ (dI/dt) _c =5.4A/ms Gate open				20	V/us
Turn-on time		t _{gt}	$I_{TM}=16\text{A} \quad , V_{DM}=V_{DRM(MAX)}$ $I_G=0.1\text{A}, dI_G/dt=5\text{A}/\mu\text{S}$				2	us



TO-18 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
Φ	3.000	3.200	0.118	0.126



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