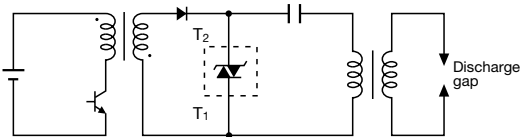


# PNPN Switch

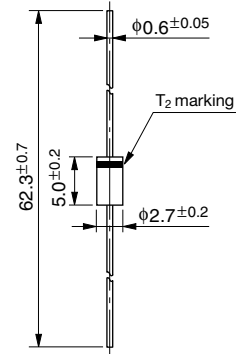
## ET0131, ET0141, ET0151, ET0201

Example of application circuit (ignition)



External Dimensions

(Unit: mm)



Weight: Approx. 2.6g

### Absolute Maximum Ratings

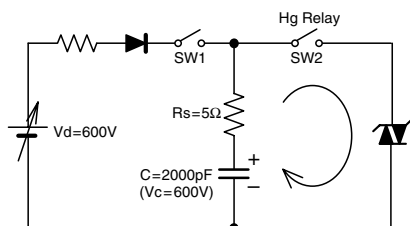
Parameter	Symbol	Ratings				Unit	Conditions
		ET0131	ET0141	ET0151	ET0201		
Non-repetitive surge voltage	$V_{DSM}^+$	600				V	$C=2000\text{pF}$ , $R_s=5\Omega$ , $T_j=25^\circ\text{C}$ , $V_c=600\text{V}$ ( $T_2^+$ , $T_1^-$ ), 1 shot, Refer to Fig1
Repetitive off-state voltage	$V_{DRM}^+$	90	115	115	170	V	$T_j=-40^\circ\text{C} \sim +125^\circ\text{C}$ , only ( $T_2^+$ , $T_1^-$ )
RMS on-state current	$I_{T(RMS)}$	0.6				A	DC, $T_\theta \leq 112^\circ\text{C}$
Surge on-state current	$I_{TSM}$	80				A	$T_a=25^\circ\text{C}$ , $W_p=10\mu\text{s}$ , Half-sine-wave 1 cycle, peak value, $f=50\text{Hz}$
Rate-of-rise of on-state current	$di_T/dt$	30				A/ $\mu\text{sec}$ .	
Junction temperature	$T_j$	$-40 \sim +125$				$^\circ\text{C}$	
Storage temperature	$T_{stg}$	$-40 \sim +125$				$^\circ\text{C}$	

### Electrical Characteristics

Parameter	Symbol	Ratings				Unit	Conditions
		ET0131*	ET0141	ET0151*	ET0201		
Breakeover voltage	V <sub>BO</sub> <sup>+</sup>	120~138	134~146	142~157	190~210	V	
Breakeover current	I <sub>BO</sub> <sup>+</sup>	150max	100max			μA	
Off-state leakage current	I <sub>DRM</sub> <sup>+</sup>	10max				μA	V <sub>D</sub> =V <sub>DRM</sub> <sup>+</sup>
Holding Current	I <sub>H</sub> <sup>+</sup>	25typ				mA	
	I <sub>H</sub> <sup>-</sup>	20typ					
On-state voltage	V <sub>T</sub>	±2.5				V	I <sub>T</sub> =±10A
Insulation resistance	R	100min				MΩ	Between lead and side of plastic body (Except surface for leads)
Thermal resistance	R <sub>th(j-ℓ)</sub>	20max				°C/W	Between junction and lead

\*: Under development

Fig.1



As the SW2 remains open, close the SW1 to charge the capacitor,  $C=2000\text{pF}$ , up to 600V to open the SW1. After the capacitor charged up to the certain voltage, close the SW2 and impose voltage on the die.

**ET0131, ET0141, ET0151, ET0201**