



# Thyristor Surge Suppressors (TSS)

[Home](#) [Circuit Protection Components](#) Thyristor Surge Suppressors (TSS)

Thyristor Surge Suppressors Referred to as TSS; also known as SIDACtor

TSS is a kind of overvoltage protection device, which is made by using the principle of Thyristor. It relies on the breakdown current of the PN structure to trigger the device's conduction and discharge, which can flow a large surge pulse current.

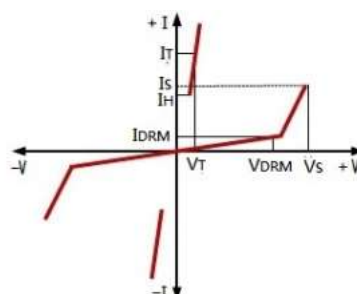
Working principle: When the voltage across the TSS exceeds its breakdown voltage  $V_S$ , the TSS will be short-circuited to maintain a low impedance. When the current flowing through the TSS is less than the holding current ( $I_H$ ) of the element, the TSS will return to the high blocking open state.

Compared with the TVS of the same size, the TSS has a larger surge pulse current tolerance and a lower capacitance value. It can be used in the signal line instead of the TVS to obtain a higher surge protection level.

## TSS selection

### precautions :

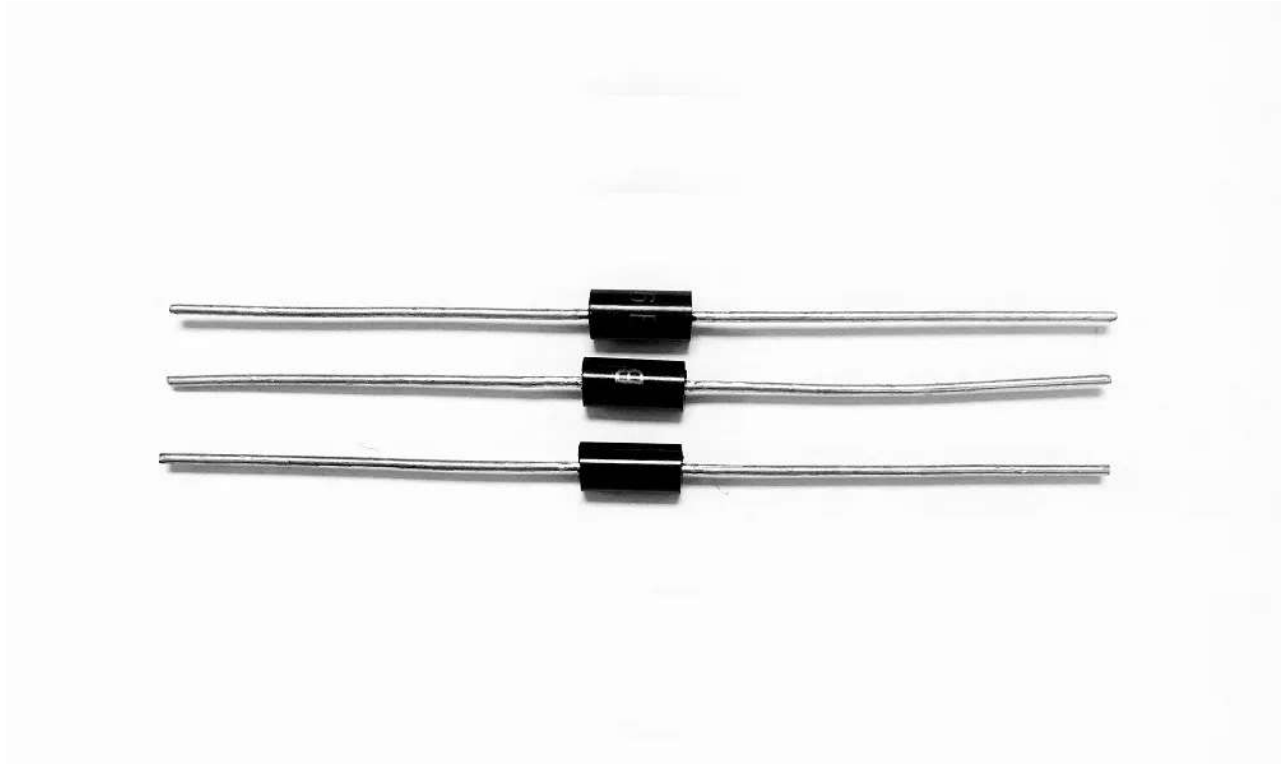
- Capacitance value  
: When using TSS  
on



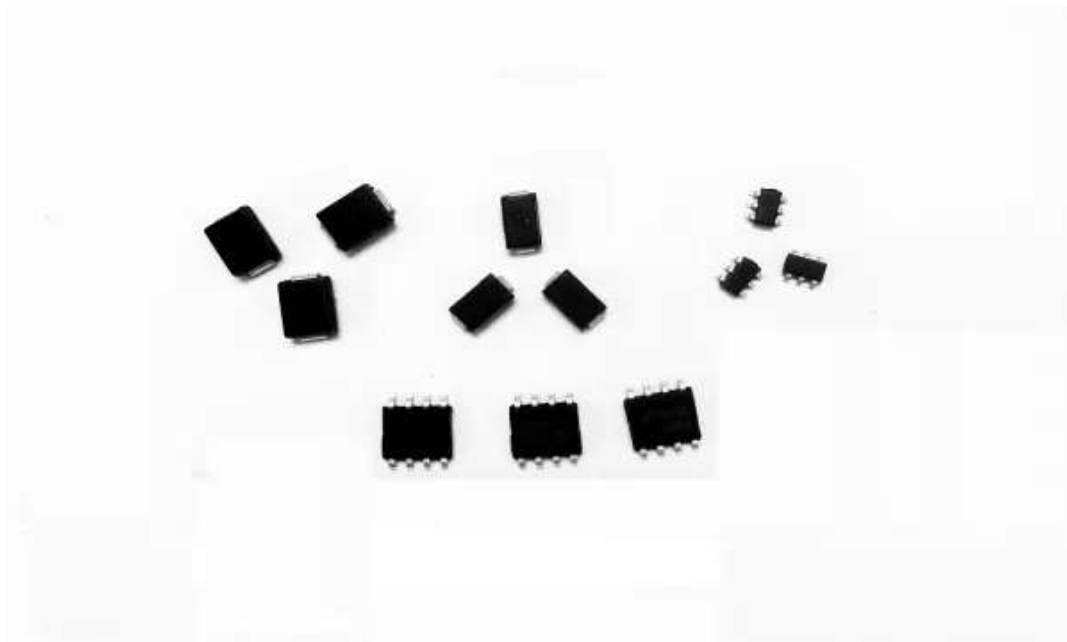
$V_{DRM}$	Stand-off Voltage
$V_T$	On state voltage
$I_H$	Holding current
$I_S$	Breakover current
$I_{DRM}$	Leakage current at stand-off voltage
$I_T$	On state current
$V_S$	Breakover voltage

communication lines, pay attention to its capacitance value not to affect signal transmission.

- Freewheeling problem : TSS has a freewheeling problem, so it cannot be directly applied to power lines



DIP TYPE



SMD TYPE

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