

# THE SMALLEST 1500 W TVS ON THE MARKET



## More power in SMB flat package



**ST's 1500 W Transil™ series offers the absolute best-in-class performance at full power even with high junction temperature**

Made to resist the stress levels specified in standards such as IEC 61000-4-x and ISO 7637 for automotive applications, ST's transient voltage suppressors (TVS) are available in SMA and SMB Flat packages to help optimize cost and space.

Rated 1500 W at 25°C, they fit tough environments with power capability at 1100 W at 175 °C.

Manufactured on ST's upgraded production lines using robust and well-known silicon die leads to improved reliability for your applications.

### KEY FEATURES

- The best power density in the market
- Lower cost per watt ratio
- Footprint compatible with SMC thanks to a new footprint
- $T_j$  (max.) = 175 °C
- 1 mm thick

### KEY BENEFITS

- Thinner applications
- 56% space saving on PCB
- Automatic visual inspection compatible
- IR reflow and solder wave compatible

### KEY APPLICATIONS

- Automotive
  - DC to DC converters
  - Power rail supplies
- Motor control
  - Robots, drones, power tools, and e-bikes
- Telecommunications
  - Power line protection circuits
- SMPS
  - DC line, MOSFET and IGBT protection circuits
- Consumer
  - LNB circuits and power supplies

## Differentiation and improvements

### Made for slim applications

The SMB Flat package is only 1 mm thick while the SMC is 2.65 mm.

### High temperature capability

With a maximum  $T_j$  rating of 175 °C, for automotive and industrial grades, both series are built to comply with specifications for harsh environments.

### Low power derating at high temperature

- 1100 W at 175°C

### Increased power / size ratio

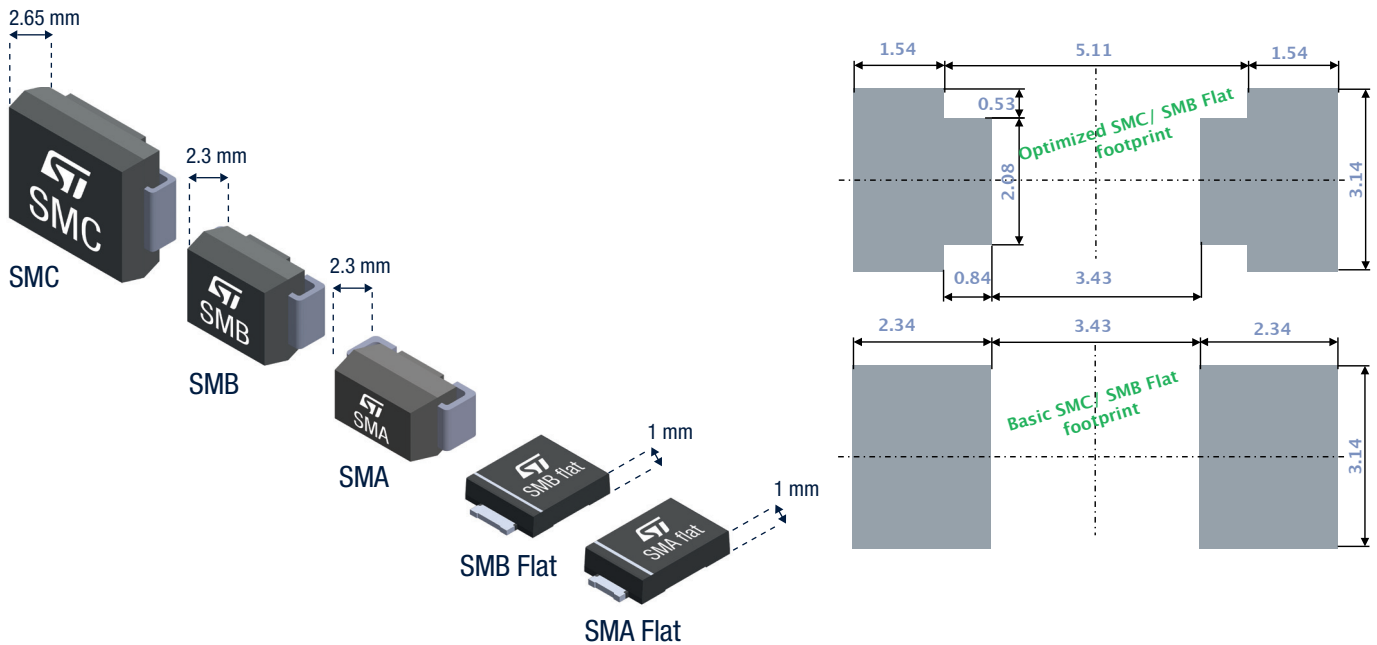
By increasing the power capability to

- 1500 W in a SMB Flat package (SMB15F)
- 600 W in a SMA Flat package (SMA6F)

### Low leakage

- Leakage current rated 5 times lower than most of our competitors
- IR specified at 85°C

## ST TVS package and footprint



## TVS flat range

Industrial grade TVS	Automotive grade TVS	Stand of voltage range ( $V_{RM}$ )	Breakdown voltage ( $V_{br}$ )	10/1000 $\mu$ s surge capability ( $P_{PP}$ )	8/20 $\mu$ s surge capability ( $P_{PP}$ )	Package
SMA4FxxA	SMA4FxxAY	5 V to 188 V	6.8 V to 220 V	400 W	2.5 kW	SMA Flat
SMA6FxxA	SMA6FxxAY	5 V to 188 V	6.8 V to 220 V	600 W	4 kW	SMA Flat
SMB6FxxA	SMB6FxxAY	5 V to 188 V	6.8 V to 220 V	600 W	4 kW	SMB Flat
SMB15FxxA	SMB15FxxAY	5 V to 64 V	6.8 V to 75 V	1500 W	10 kW	SMB Flat

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