

# Transky™ protection: the best of both worlds

Low forward voltage Transil™ protects computer and consumer devices against EOS and ESD strikes



Expanding its EOS and ESD protection portfolio, **STMicroelectronics** is now releasing its 5V and 12V low forward voltage Transil protection devices, the Transky SMTY5.0A and SMTY12A.

The Transky is designed specifically for miniaturized electronic devices and equipment subject to ESD transient over-voltages. The Transky combines the performance of a Transil or TVS (transient voltage suppressor) and a low forward voltage Schottky diode in a monolithic structure.

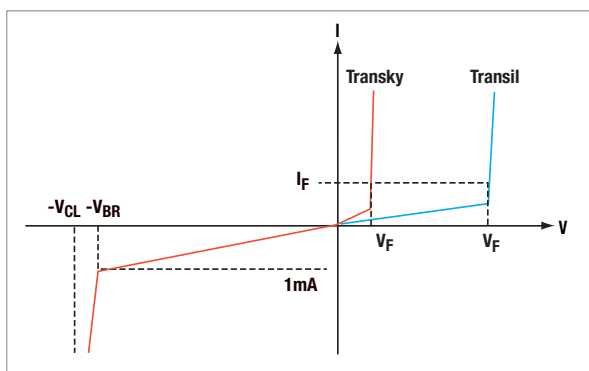
With its 600W power capability embedded in an SMA package, the Transky offers high transient capability for fixed electronic devices, such as hard disk drives in computers and consumer applications.

## Added value compared to Transil

The Transky clamps negative spikes at Schottky forward voltage (0.48V compared to 1V for standard Transil), while positive overvoltages are limited at Transil  $V_{CL}$  level. Low forward voltage Transil protection of the application is then fully achieved.

## Transky applications

The Transky is ideal for the protection of power lines in limiting the voltage across the supplied IC, in case of accidental overload and reverse polarity. Targeted applications include fixed electronic devices such as hard disk drives.



## Main features

- Integration of a Transil with a Schottky diode
- JEDEC registered SMA package outline
- Stand-off voltage:
  - 5V for SMTY5.0A
  - 12V for SMTY12A
- Fast response time
- RoHS compliant

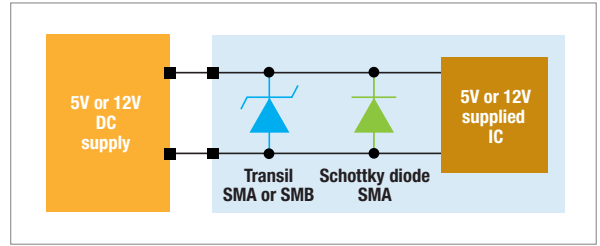
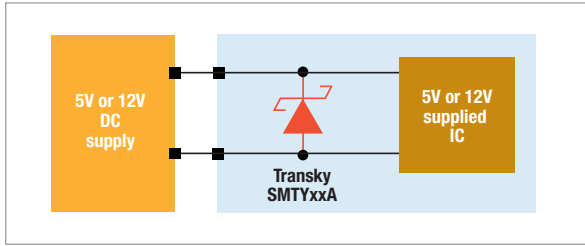
## Benefits

- Optimized PCB area: up to 62% space saving versus discrete solution
- High peak pulse power in SMA package: up to 600W
- Low clamping factor  $V_{CL}/V_{BR}$
- Low forward voltage: 0.48V @ 1A
- Optimized low leakage current: up to 70% saving versus discrete solution

## Standard compliance

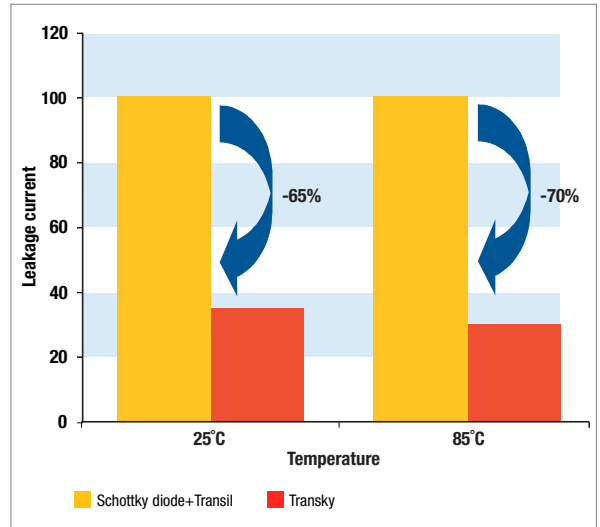
- IEC 61000-4-2 Level 4: air discharge 15kV, contact discharge 8kV

## Transky solution versus discretetes



## Transky key parameters

Part number	Parameter	Value	Unit
SMTY12A	Breakdown voltage @1mA	> 13.2	V
	Clamping voltage @31A	< 18	V
	Forward voltage @1A	< 0.48	V
	Leakage current @12V	< 20	μA
SMTY5.0A	Breakdown voltage @10mA	> 6.4	V
	Clamping voltage @31A	< 9	V
	Forward voltage @1A	< 0.48	V
	Leakage current @5V	< 10	μA



## STMicroelectronics' Transky: the right choice

Transky SMTY5.0A and SMTY12A solutions provide the best trade-off for 5V and 12V power line protection respectively, delivering improved clamping voltage and low forward voltage together with very low leakage current.

Its SMA package offers a true standard package and space saving solution on fixed electronic devices such as hard disk drives (HDD).



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