

- ISO 9001-2008 Certified
- ISO14001:2004 Certified
- TS 16949 Certified
- Traceability per MIL standard
- Certification of Compliance
- Additional screening tests upon request
- Reliability Testing
- Reliability and Fit data are available
- AEC-Q101 Qualified Products

## SCREENING OPTIONS

Screen/Test Description	Commercial Flow	U	UA	UX
100% Wafer Probe	R	R	R	R
3-Sigma lot norm determination		R	R	R
Surge Test	1x	1x	1x	1x
100% DC Electrical Tet Go-No-Go		R	R	R
Temperature Cycling		10 Cycles	10 Cycles	20 Cycles
Post TC Surge Test		1x	3x	10x
100% Thermal Impedance		R	R	R
100% DC Electrical Test			go-no-go	R
HTRB		24 hrs	96 hrs	
100% DC Electrical Test	go-no-go	go-no-go	go-no-go	R
Delta Calculation				R
PDA Calculation				R
100% Visual Inspection	R	R	R	R
Certification of Conformance	R	R	R	R
Group A Inspection				O
Group B Inspection				O
Group C Inspection				O

## ULTRA FAST RECOVERY RECTIFIERS

IO: 1A-60A • PIV:50V-1200V

- Reverse recovery time: <100ns
- Good switching characteristics
- Very short reverse recovery time

Applications:  
*Industrial*  
switching power supplies, PWM, UPS, AC motor frequency control and high-frequency heating devices as a high-frequency and high-current free-wheeling diode or recifier diode

Packages:  
DO-15, DO-201AD, DO-41, DPAK, D2PAK, ITO-220AC, SMA, SMB, SMC, TO-220AB, TO-220AC, TO-247AC, TO-247AD and TO-3P

## FAST RECOVERY RECTIFIERS

IO: 0.2A-16A • PIV:50V-2000V

- Reverse recovery time: <500ns
- Reduced power dissipation
- Minimum reverse recovery characteristics

Applications:  
*Industrial*  
switch mode power supplies, electronic ballast, small household appliances, inverters, converters, ultrasonic systems, choppers, low RF interference and free wheeling diodes.

Packages:  
DO-15, DO-27, DO-41, R-1, R-6, SMA, SMB, SMC, TO-220-AB, and TO-220AC

## STANDARD RECTIFIERS

IO: 1A-6A • VRWM:50V-1300V

- Reverse recovery time: <500ns

Applications:  
*Industrial*  
Power supplies, control boards, LED lighting and communications equipment.

Packages:  
A-405, DO-15, DO-27, DO-41, R-1, R-6, SMA, SMB and SMC

## TRADITIONAL SCHOTTKY RECTIFIERS

IO: 0.01A-120A • PIV:10V-220V

- Metal semiconductor junction component
- Suitable for low-voltage, high-current output occasions as high-frequency rectifiers.

Applications:  
*Industrial*  
switching power supplies, inverters and drive circuits as a high-frequency, low-voltage, high current rectifier diode, freewheeling diode and protection diode

Packages:  
DO-15, DO-201AD, DO-41, DPAK, D2PAK, ITO-220AB, ITO220AC, R-6, SMA, SMAS, SMB, SMC, SOD-123, SOD-323, SOD-523, SOT-23, SOT-223, SOT-323, TO-220AB, TO-220AC, TO-247AD, TO-262 and TO-277A

## ULTRA LOW VF SCHOTTKY RECTIFIERS

IO: 5A-40A • PIV: 45V-200V

- VF15%-20% lower than the traditional Schottky rectifier
- Superior efficiency and thermal performance
- Most suitable if system's operation temperature is higher, and a higher efficiency and reliability is required

Applications:  
*Industrial*  
Packages:  
D-PAK, D2PAK, ITO-220AB, ITO-220AC, R-6, TO-220AB, TO-220AC, TO-277A



## SCHOTTKY MODULES

IO: 30A-440A

PIV: 15V-200V

Packages:  
PRM1-1, PRM2, PRM2-SL, PRM2-SM, PRM3, PRM3-SL, PRM3-SM, PRM4, PRM4-ISO, SPD-1, SPD-1A, SPD-2, SPD-2A, SPD-3, SPD-3A, TO-249, and TO-249AA

Applications:  
*Industrial*  
high current switching power supplies, plating power supplies, UPS systems, converters, free-wheeling diodes, welding and reverse battery protection.

## TRANSIENT VOLTAGE SUPPRESSORS

Power: 30W-30,000W

higher current conducting capacity compared to Zener diodes

## TVS ARRAYS

Power: 300W-500W



- Multiple diodes in one
- Multi-line protection in the circuit

You can:  
• save board area  
• optimize circuit layout  
• improve protective effect

Applications:  
*Industrial*  
In ESD, EFT, lightning and other applications as overvoltage protection diodes

Packages:  
DO-15, DO-201AE, DO-41, P-600, SMA, SMB, SMC, SOD-323 and SPD-4

Applications:  
*Consumer Electronics*  
multiple signal line interface overvoltage protection, such as USB, RS232 LCD bus etc.  
Packages:  
SO-8, SO-14, SO-16, SOD-323 and SOT-23

## ZENER DIODES

Power: 56mW-1000mW

- High-resistance before critical breakdown
- Surface contact silicon semiconductor diode
- Used to keep the voltage stable in the circuit

Applications:  
*General Purpose, Consumer Electronics, Industrial*  
Packages:  
DL-35, DL41, DO-35, DO-214AC, DO-41, SOD-123, SOD-523 and SOT-23

## SMALL SIGNAL SWITCHING DIODES

IO: 150mA-250mA • PIV:35V-250V

- Operating current several hundred milliamps to several amp
- Fast switching speed, a low forward

Applications:  
*Consumer Electronics*  
voltage drop, and a high efficiency logic operation circuits that have small current, such as switch diode, limiter diode, clamp diode or detector diode.  
Packages:  
DL-35, DO35, SOD-223, SOD-323, SOT-23 and SOT-323

## WAFERS AND DIE

Silicon chips for all the devices we make are also available at Digi-Key

Standard metallization:

Bottom:

-> solderable (Ag)

Top:

-> solderable (Ag) or wire bondable (Al)

Format: uncut wafer, cut wafer on tap, in wafer pack, in bottle

- 100% tested for room temperature electrical parameters
- Suitable for modules and hybrids
- Silicon chip with Mo disc brazed on top or discs
- Brazed on both sides are also available



www.digikey.com



SMC has more than one thousand AEC-Q101 qualified products fully PPAP'd and optimized for automotive applications



Build to Source Controlled Drawing

Special Testing and Screening per Customer Request

Special Package Design

Special Reliability Testing

Reliability and Fit Data Available

Individual Project Monitoring

AEC-Q101 Qualified Products

SMC Diode Solutions, a division of Sangdest Microelectronics (Nanjing) Co., Ltd (SMC), was founded in 1997 to support high reliability customers. Located in Plainview, New York with a fabrication facility in Nanjing, China, SMC designs and manufactures their own products at the highest quality standards. SMC provides industry leading USA design proficiency in conjunction with high-quality low-cost Asia manufacturing. Our products excel where high reliability is demanded. We are TS16949, ISO14001 and ISO9001 certified. Our application segments include consumer electronic, renewable energy, aerospace and medical technologies. SMC's products are pervasive in the designs of leading manufacturers of LCD displays, communications equipment, solar panels, wind turbines, aircraft and power supplies.

Our products are widely accepted in both domestic and international markets as demonstrated by our solid annual sales growth. We exceed rigorous qualification requirements mandated by our customers who are known worldwide for both their superior products and for their exceptionally demanding supplier qualification teams.

SMC is committed to conducting its operations in an ethical and socially responsible manner. Our firm actively works to reduce waste while recycling to preserve resources and protect the environment.

Our staff is dedicated to consistently meeting our customer's expectations. We offer prompt technical and sales support while delivering the highest quality products with on-time delivery. Please challenge our team to meet your firm's requirements.

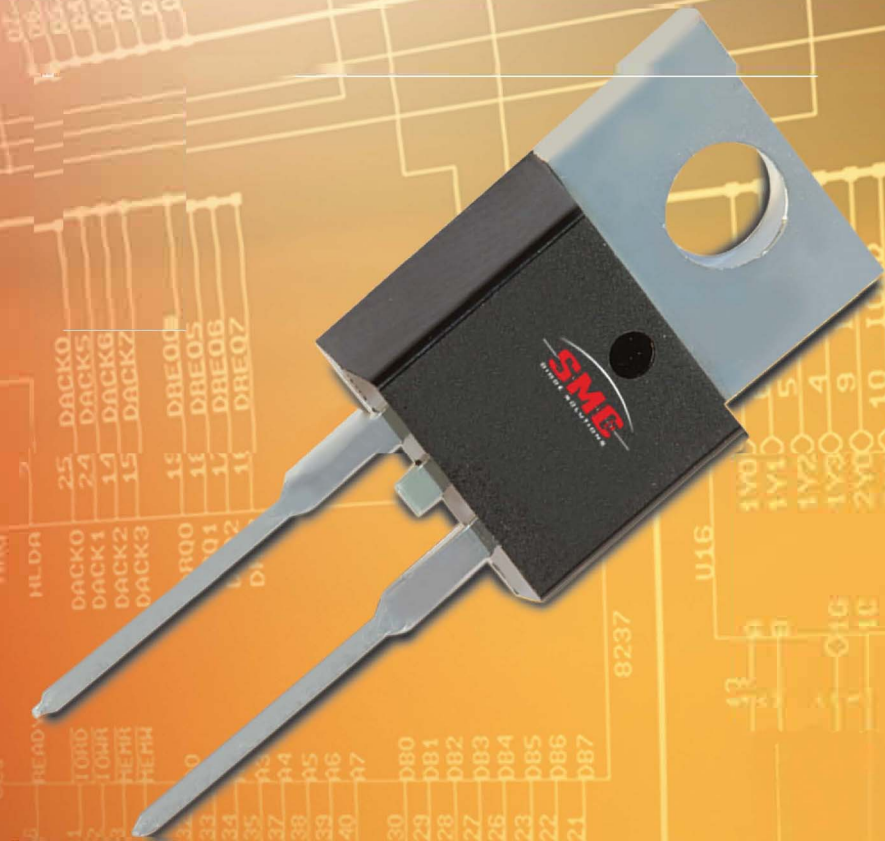
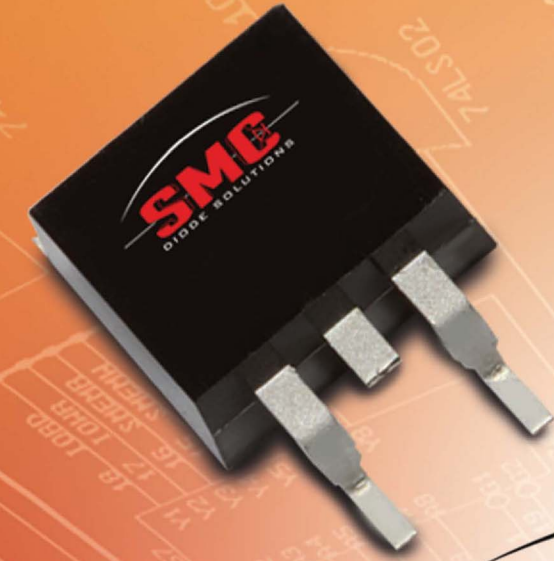


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