



SMC

DIODE SOLUTIONS
SINCE 1997

PORTFOLIO

Protec GmbH
Vertrieb elektronischer Bauteile
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ABOUT SMC:

- Founded in 1997
- Own design and wafer fabrication
- Strong in engineering & manufacturing
- Product used in aerospace, medical, communication, industrial & consumer market
- Committed to quality
- Strong technical support and customer support
- Socially, ethically and environmentally responsible company
- Worldwide sales & distribution support

SMC QUALITY STANDARDS:

- ISO 9001:2008 certified
- ISO 14001:2004 certified
- TS16949 certified
- Traceability per MIL standard
- Certification of compliance
- Additional screening tests upon request
- Reliability and fit data are available



COMPANY CONTACT INFORMATION

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SCREENING OPTIONS

SCREEN OR TEST DESCRIPTION	COMMERCIAL FLOW	U	UA	UX
PREFIX				
100% Wafer Probe	R	R	R	R
3-Sigma lot norm determination		R	R	R
Surge Test	1x	1x	1x	1x
100% DC Electrical Test 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 Calculations				R
PDA Calculations				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 : 1 A - 60 A
PIV : 200 V - 1200 V

Reverse recovery time: < 100 ns

Good switching characteristics

Very short reverse recovery time

Application:

switching power supplies, PWM, UPS; AC motor frequency control and high-frequency heating devices as a high-frequency and high-current freewheeling 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 : 0.2 A - 16 A
PIV : 50 V - 2000 V

Reverse recovery time: < 500 ns

Reduced power dissipation

Minimum reverse recovery characteristics

Application:

switching 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-220AB and TO-220AC

REGULAR RECTIFIERS

Io : 1 A - 6 A
PIV : 50 V - 1300 V

Reverse recovery time: > 500 ns

Application:

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,

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TRADITIONAL SCHOTTKY RECTIFIERS

Io : 0.01 A - 120 A
PIV : 10 V - 220 V

Metal semiconductor junction component

Suitable for low-voltage, high-current output occasions as high-frequency rectifiers

Application:
 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, SMB, SMC, SOD-123, SOD-323, SOD-523, SOT-23, SOT-223, SOT-323, TO-220AB, TO-220AC, TO-247AD, TO-262 and TO-227B

ULTRA LOW VF SCHOTTKY RECTIFIERS

Io : 1 A - 60 A
PIV : 40 V - 300 V

Vf 15% - 20% lower than the traditional Schottky rectifiers

Superior efficiency and thermal performance

Most suitable if system's operation temperature is higher, and a higher efficiency and reliability is required

Packages:
 DPAK, D2PAK, ITO-220AB, ITO-220AC, R-6, TO-220AB, TO-220AC and TO-227B

SCHOTTKY MODULE

Io : 30 A - 440 A
PIV : 15 V - 200 V

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

Packages:
 PRM1-1, PRM2, PRM2-SL, PRM2-SM, PRM3, PRM3-SL, PRM3-SM, PRM4, PRM4-ISO, SPD-1, SPD-1A, SPD-2, SPD2A, SPD-3, SPD-3A, TO-249 and TO-249AA

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TRANSIENT VOLTAGE SUPPRESSORS

Power: 30 W - 30,000 W

Higher current conducting capacity compared to Zener diodes

Application:
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

ESD PROTECTION DEVICES

Power: 40 W - 500 W

Multiple TVS diodes in one

Multi-line protection in the circuit

Application:
multiple signal line interface overvoltage protection, such as USB, RS232 LCD bus etc.

You can:

- save board area
- optimize circuit layout
- improve protective effect

Packages:
SO-8, SO-16, SOD-323 and SOT-23

ZENER DIODE

Power: 56 mW - 1000 mW

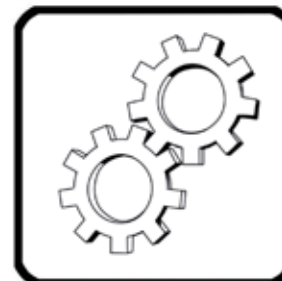
High-resistance before critical breakdown

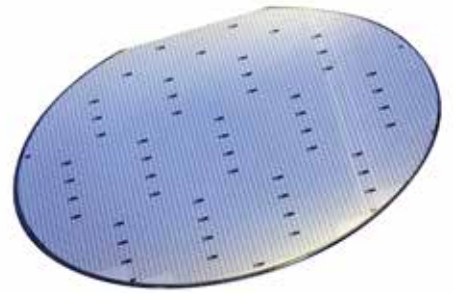
Surface contact silicon semiconductor diode

Used to keep the voltage stable stable in the circuit

Packages:
DL-35, DL-41, DO-35, DO-214AC, DO-41, SOD-123, SOD-523 and SOT-23

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SMALL SIGNAL SWITCHING DIODES

Io : 150 mA - 250 mA
PIV : 35 V - 250 V

Operating current several hundred milliamps to several amp

Fast switching speed, a low forward voltage drop, and a high efficiency

Application:
logic operation circuits that have small current, such as switch diode, limiter diode, clamp diode or detector diode

Packages:
DL-35, DO-35, SOD-123, SOD-323, SOT-23 and SOT-323

CHIPS

Silicon chips for all the devices we make are also available for purchase

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

Standard metallization

100% tested for room temperature electrical parameters
Suitable for modules and hybrids

Bottom:

- solderable (Ag)

Top:

- either solderable (Ag)
- or wire bondable (Ag)

Silicon chip with Mo disc brazed on top or disc brazed on both sides are also available

OTHER SERVICES

Build to Source Controlled Drawing

Special reliability testing

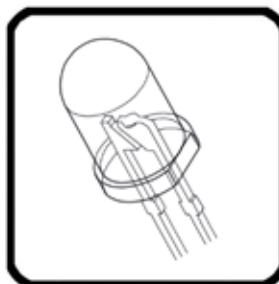
Special Testing and Screening per customer Request

Reliability and fit data available

Special Package Design

Individual project monitoring

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The logo features the letters 'SMC' in a large, bold, black, sans-serif font. A horizontal line passes through the middle of the letters. A stylized diode symbol, consisting of a triangle pointing right and a vertical line, is integrated into the right side of the 'C'.

SMC

DIODE SOLUTIONS

SALES REPRESENTATIVE

A large, semi-transparent red arrow graphic pointing downwards and to the right, located in the bottom right corner of the white area.