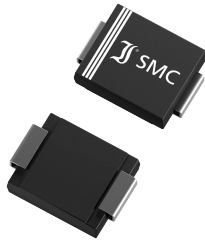


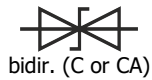
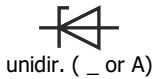
<b>3.0SMCJ5.0A ... 3.0SMCJ170CA</b> <b>SMD Transient Voltage Suppressor Diodes</b> <b>SMD Spannungs-Begrenzer-Dioden</b>	<b>P<sub>PPM</sub> = 3000 W</b> <b>P<sub>M(AV)</sub> = 6.0 W</b> <b>T<sub>jmax</sub> = 150°C</b>	<b>V<sub>WM</sub> = 5.0 ... 170 V</b> <b>V<sub>BR</sub> = 6.8 ... 200 V</b>
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Version 2021-12-06

**SMC**  
~ DO-214AB



SPICIE Model & STEP File <sup>1)</sup>



**Marking**

Type = Part number. Cathode mark only at unidirectional types

Typ = Artikel-Nr. Kathoden-Markierung nur bei unidirektionalen Typen

**HS Code** 85411000

**Typical Applications**

Over-voltage protection  
ESD protection  
Free-wheeling diodes  
Commercial / industrial grade  
Suffix -Q: AEC-Q101 compliant <sup>1)</sup>  
Suffix -AQ: AEC-Q101 qualified <sup>1)</sup>

**Features**

Uni- and Bidirectional versions  
Peak pulse power of 3000 W (10/1000 µs waveform)  
Very fast response time  
Compliant to RoHS (exemp. 7a), REACH, Conflict Minerals <sup>1)</sup>

**Mechanical Data <sup>1)</sup>**

Taped and reeled 3000 / 13"  
Weight approx. 0.21 g  
Case material UL 94V-0  
Solder & assembly conditions 260°C/10s  
MSL = 1



**Typische Anwendungen**

Schutz gegen Überspannung  
ESD-Schutz  
Freilauf-Dioden  
Standardausführung  
Suffix -Q: AEC-Q101 konform <sup>1)</sup>  
Suffix -AQ: AEC-Q101 qualifiziert <sup>1)</sup>

**Besonderheiten**

Uni- und Bidirektionale Versionen  
3000 W Impuls-Verlustleistung (10/1000 µs Strom-Impuls)  
Sehr schnelle Ansprechzeit  
Konform zu RoHS (Ausn. 7a), REACH, Konfliktmineralien <sup>1)</sup>

**Mechanische Daten <sup>1)</sup>**

Gegurtet auf Rolle  
Gewicht ca.  
Gehäusematerial  
Löt- und Einbaubedingungen

For bidirectional types (suffix "C" or "CA"), electrical characteristics apply in both directions.  
Für bidirektionale Dioden (mit Suffix "C" oder "CA") gelten die elektrischen Werte in beiden Richtungen.

**Maximum ratings <sup>2)</sup>**

**Grenzwerte <sup>2)</sup>**

Peak pulse power dissipation (10/1000 µs waveform) Impuls-Verlustleistung (Strom-Impuls 10/1000 µs)		P <sub>PPM</sub>	3000 W <sup>3)</sup>
Steady state power dissipation – Verlustleistung im Dauerbetrieb	T <sub>T</sub> = 75°C	P <sub>M(AV)</sub>	6 W
Peak forward surge current Stoßstrom in Fluss-Richtung	Half sine-wave Sinus-Halbwellen 60 Hz (8.3 ms)	I <sub>FSM</sub>	300 A <sup>4)</sup>
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		T <sub>j</sub> T <sub>s</sub>	-50...+150°C -50...+150°C

**Characteristics**

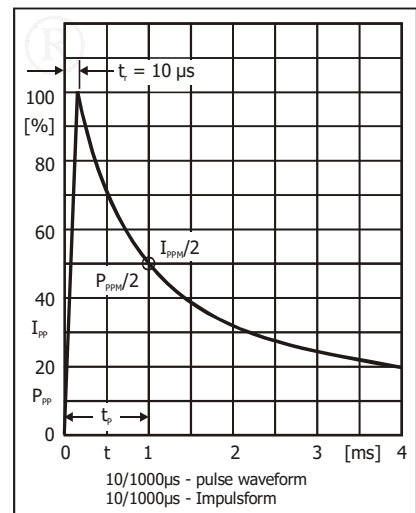
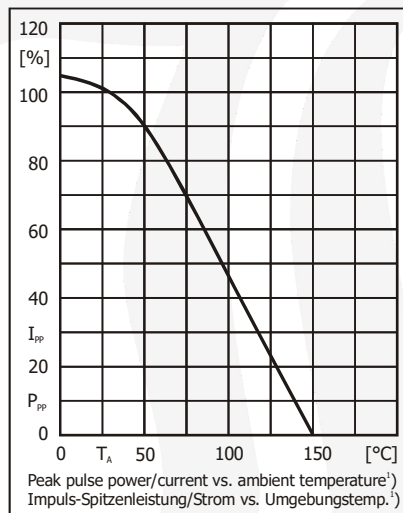
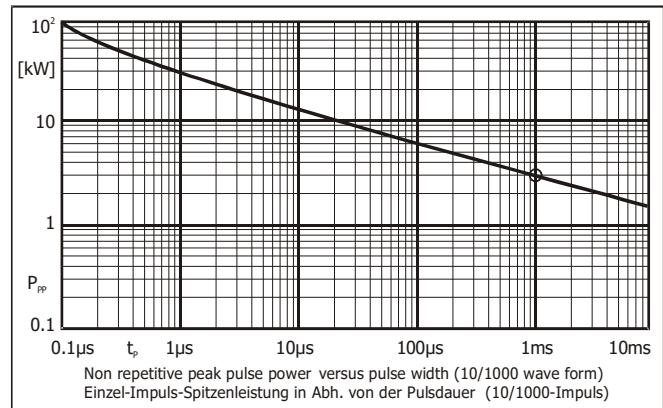
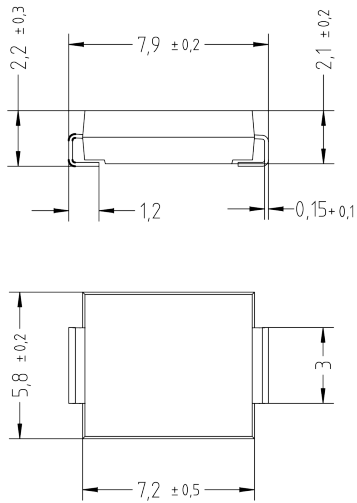
**Kennwerte**

Max. instantaneous forward voltage Augenblickswert der Durchlass-Spannung	I <sub>F</sub> = 25 A V <sub>BR</sub> ≤ 200 V	V <sub>F</sub>	< 3.0 V <sup>4)</sup>
Typ. thermal resistance junction to ambient – Typ. Wärmewiderstand Sperrschicht – Umgebung Typ. thermal resistance junction to terminal – Typ. Wärmewiderstand Sperrschicht – Anschluss		R <sub>thA</sub> R <sub>thT</sub>	33 K/W <sup>5)</sup> 10 K/W

- 1 Please note the [detailed information on our website](#) or at the beginning of the data book  
Bitte beachten Sie die [detaillierten Hinweise auf unserer Internetseite](#) bzw. am Anfang des Datenbuches
- 2 T<sub>A</sub> = 25°C unless otherwise specified – T<sub>A</sub> = 25°C wenn nicht anders angegeben
- 3 Non-repetitive pulse see curve I<sub>pp</sub> = f (t) / P<sub>pp</sub> = f (t)  
Höchstzulässiger Spitzenwert eines einmaligen Impulses, siehe Kurve I<sub>pp</sub> = f (t) / P<sub>pp</sub> = f (t)
- 4 Unidirectional diodes only – Nur für unidirektionale Dioden
- 5 Mounted on PCB with 50 mm<sup>2</sup> copper pad per terminal – Montage auf Leiterplatte mit 50 mm<sup>2</sup> Lötpad je Anschluss



**Dimensions - Maße [mm]**



**Disclaimer:** See data book page 2 or [website](#)  
**Haftungsausschluss:** Siehe Datenbuch Seite 2 oder [Internet](#)

- 1 Mounted on PCB with 50 mm<sup>2</sup> copper pad per terminal – Montage auf Leiterplatte mit 50 mm<sup>2</sup> Löt看pad je Anschluss
- 2 <sup>3)</sup> Available in -Q. Ordering code e. g. 3.0SMBJ24A-Q – <sup>4)</sup> **Available in -AQ. Ordering code e. g. 3.0SMBJ33CA-AQ**  
<sup>3)</sup> Erhältlich in -Q. Bestellnummer z. B. 3.0SMBJ24A-Q – <sup>4)</sup> **Erhältlich in -AQ. Bestellnummer z. B. 3.0SMBJ33CA-AQ**
- 3 Bidirectional types of V<sub>WM</sub> ≤ 10V have double reverse current limit – Bidir. Typen mit V<sub>WM</sub> ≤ 10V haben doppelte Sperrstromgrenze

# Mouser Electronics

Authorized Distributor

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[3.0SMCJ5.0CA](#) [3.0SMCJ150A](#) [3.0SMCJ17A](#) [3.0SMCJ17A-AQ](#) [3.0SMCJ33CA-AQ](#) [3.0SMCJ45CA](#) [3.0SMCJ48A](#)  
[3.0SMCJ9.0CA](#) [3.0SMCJ13CA](#) [3.0SMCJ15A-AQ](#) [3.0SMCJ22CA](#) [3.0SMCJ26CA](#) [3.0SMCJ43CA-AQ](#) [3.0SMCJ54A](#)  
[3.0SMCJ8.5CA](#) [3.0SMCJ90A](#) [3.0SMCJ11CA](#) [3.0SMCJ11CA-AQ](#) [3.0SMCJ14A-AQ](#) [3.0SMCJ24CA](#) [3.0SMCJ33A](#)  
[3.0SMCJ64CA](#) [3.0SMCJ7.0A](#) [3.0SMCJ85A](#) [3.0SMCJ14A](#) [3.0SMCJ150CA](#) [3.0SMCJ22A](#) [3.0SMCJ26A](#)  
[3.0SMCJ43A-AQ](#) [3.0SMCJ51A](#) [3.0SMCJ8.0CA](#) [3.0SMCJ110CA](#) [3.0SMCJ12A](#) [3.0SMCJ13A-AQ](#) [3.0SMCJ22CA-AQ](#)  
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[3.0SMCJ12A-AQ](#) [3.0SMCJ18CA-AQ](#) [3.0SMCJ30A-AQ](#) [3.0SMCJ36A](#) [3.0SMCJ6.5CA](#) [3.0SMCJ7.5A](#) [3.0SMCJ70A](#)  
[3.0SMCJ11A-AQ](#) [3.0SMCJ14CA](#) [3.0SMCJ14CA-AQ](#) [3.0SMCJ17CA](#) [3.0SMCJ33CA](#) [3.0SMCJ48CA](#) [3.0SMCJ5.0A](#)  
[3.0SMCJ60CA](#) [3.0SMCJ7.0CA](#) [3.0SMCJ10A](#) [3.0SMCJ12CA-AQ](#) [3.0SMCJ130CA](#) [3.0SMCJ20CA-AQ](#) [3.0SMCJ28A-](#)  
[AQ](#) [3.0SMCJ40A](#) [3.0SMCJ58CA](#) [3.0SMCJ75A](#) [3.0SMCJ78A](#) [3.0SMCJ10CA](#) [3.0SMCJ16CA](#) [3.0SMCJ170A](#)  
[3.0SMCJ18A-AQ](#) [3.0SMCJ30CA-AQ](#) [3.0SMCJ36CA](#) [3.0SMCJ6.0CA](#) [3.0SMCJ100A](#) [3.0SMCJ160A](#) [3.0SMCJ16A](#)  
[3.0SMCJ20A-AQ](#) [3.0SMCJ28CA-AQ](#) [3.0SMCJ40CA](#) [3.0SMCJ43A](#) [3.0SMCJ54CA](#) [3.0SMCJ120A](#) [3.0SMCJ16A-AQ](#)  
[3.0SMCJ170CA](#) [3.0SMCJ22A-AQ](#) [3.0SMCJ24CA-AQ](#) [3.0SMCJ26CA-AQ](#) [3.0SMCJ36A-AQ](#) [3.0SMCJ6.5A](#)  
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