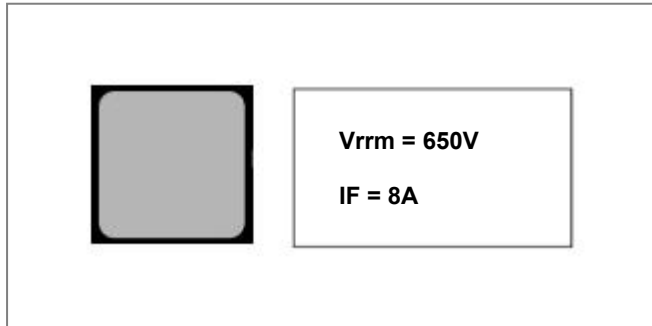


SD3-0650-S008AB

SiC Schottky Power Rectifier Chip



Description

- 650-Volt Schottky Rectifier
- Zero Reverse Recovery
- Zero Forward Recovery
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on VF

| Part Number | Die Size | Anode | Cathode |
|-----------------|---|-------|---------|
| SD3-0650-S008AB | Please contact your sales representative to get the detailed information about die layout and dimensions. | Al | Ag |

Maximum Ratings:

| Parameter | Symbol | Value | Units |
|---|----------------|-------------|-------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 650 | V |
| Surge Peak Reverse Voltage | V_{RSM} | 650 | V |
| DC Peak Blocking Voltage | V_R | 650 | V |
| Maximum DC Current* | I_F | 8 | A |
| Repetitive Peak Forward Surge Current | I_{FRM} | 37.5 | A |
| Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 90 | A |
| Operating Junction and Storage Temperature | T_J, T_{stg} | -55 to +175 | °C |

Technical Data
Data Sheet D0316, REV.-

Electrical Characteristics(T=25°C unless otherwise specified):

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---------------------------|-----------------|---|-------|------|-------|
| Forward Voltage Drop* | V _{F1} | @ 8A, Pulse, T _J = 25 °C | 1.45 | 1.7 | V |
| | V _{F2} | @ 8A, Pulse, T _J = 175 °C | 2.1 | 2.4 | V |
| Reverse Current* | I _{R1} | @V _R = rated V _R , T _J = 25 °C | 0.3 | 10 | uA |
| | I _{R2} | @V _R = rated V _R , T _J = 175 °C | 3 | 100 | uA |
| Junction Capacitance | C _T | V _R =0V, T _J =25°C, f=1MHz | 650 | - | pF |
| Reverse Recovery Charge | Q _c | I _F = 8A, di/dt = 200A/μs, V _R = 400 V, T _J =25°C | 40.55 | - | nC |
| Capacitance Stored Energy | E _c | V _R = 400 V, T _J = 25 °C | 9.93 | - | μJ |

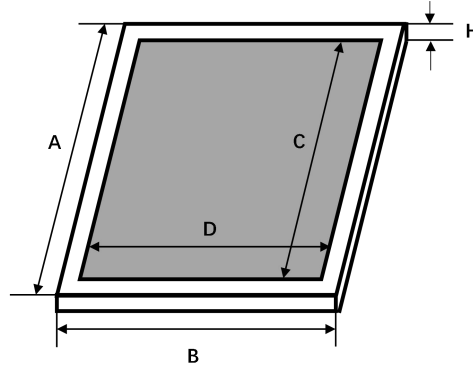
* Pulse width < 300 μs, duty cycle < 2%

Mechanical Parameters:

| Parameter | Typ. | Unit |
|---------------------------|-----------|------|
| Die Size | 1.80*1.80 | mm |
| Anode Pad opening | 1.05*1.05 | mm |
| Thickness | 350 ± 25 | μm |
| Anode Metalization (Al) | 4 | μm |
| Cathode Metalization (Ag) | 0.4 | μm |
| Frontside Passivation | Polyimide | |

Technical Data
Data Sheet D0316, REV.-

Chip Dimension



| symbol | Dimension +/- 10% |
|--------|-------------------|
| A | 1.80mm |
| B | 1.80mm |
| C | 1.05mm |
| D | 1.05mm |
| H | 350um |

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