

SIDC26D65C8

Fast switching diode chip in EMCON 3 -Technology

Features:

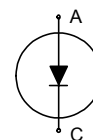
- 650V EMCON 3 technology 65 µm chip
- Soft, fast switching
- Low reverse recovery charge
- Small temperature coefficient
- Qualified according to JEDEC for target applications

Recommended for:

- Power module

Applications:

- Drives
- White goods
- Resonant applications



Chip Type	V_R	$I_{Fn}^{1)}$	Die Size	Package
SIDC26D65C8	650V	100A	6.53 x 4.02 mm ²	sawn on foil

¹⁾ nominal forward current at $T_c = 100^\circ\text{C}$, not subject to production test - verified by design/characterisation

Mechanical Parameters

Mechanical parameters			
Die size	6.53 x 4.02		mm ²
Area total	26.25		
Anode pad size	5.83 x 3.32		
Thickness	65		µm
Wafer size	200		mm
Max. possible chips per wafer	1032		
Passivation frontside	Photoimide		
Pad metal	3200 nm AlSiCu		
Backside metal	Ni Ag –system		
Die bond	Electrically conductive epoxy glue and soft solder		
Wire bond	Al, ≤500µm		
Reject ink dot size	Ø 0.65mm; max 1.2mm		
Storage environment	for original and sealed MBB bags	Ambient atmosphere air, Temperature 17°C – 25°C, < 6 month	
	for open MBB bags	Acc. to IEC62258-3: Atmosphere >99% Nitrogen or inert gas, Humidity <25%RH, Temperature 17°C – 25°C, < 6 month	



SIDC26D65C8

Maximum Ratings

Parameter	Symbol	Condition	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	$T_{vj} = 25\text{ °C}$	650	V
Continuous forward current	I_F	$T_{vj} < 150\text{ °C}$	¹⁾	A
Maximum repetitive forward current ²⁾	I_{FRM}	$T_{vj} < 150\text{ °C}$	200	
Operating junction temperature	T_{vj}		-40...+175	°C

¹⁾ depending on thermal properties of assembly

²⁾ not subject to production test - verified by design/characterisation

Static Characteristics (tested on wafer), $T_{vj} = 25\text{ °C}$

Parameter	Symbol	Conditions	Value			Unit
			min.	typ.	max.	
Reverse leakage current	I_R	$V_R = 650\text{ V}$			1.2	µA
Cathode-Anode breakdown Voltage	V_{BR}	$I_R = 0.25\text{ mA}$	650			V
Forward voltage drop	V_F	$I_F = 30\text{ A}$	1.03	1.17	1.32	

Electrical Characteristics (not subject to production test - verified by design/characterization)

Parameter		Symbol	Conditions	Value			Unit
				min.	typ.	max.	
Forward voltage drop	$T_{vj} = 25\text{ °C}$	V_F	$I_F = 100\text{ A}$		1.55	1.95	V
	$T_{vj} = 150\text{ °C}$				1.45		

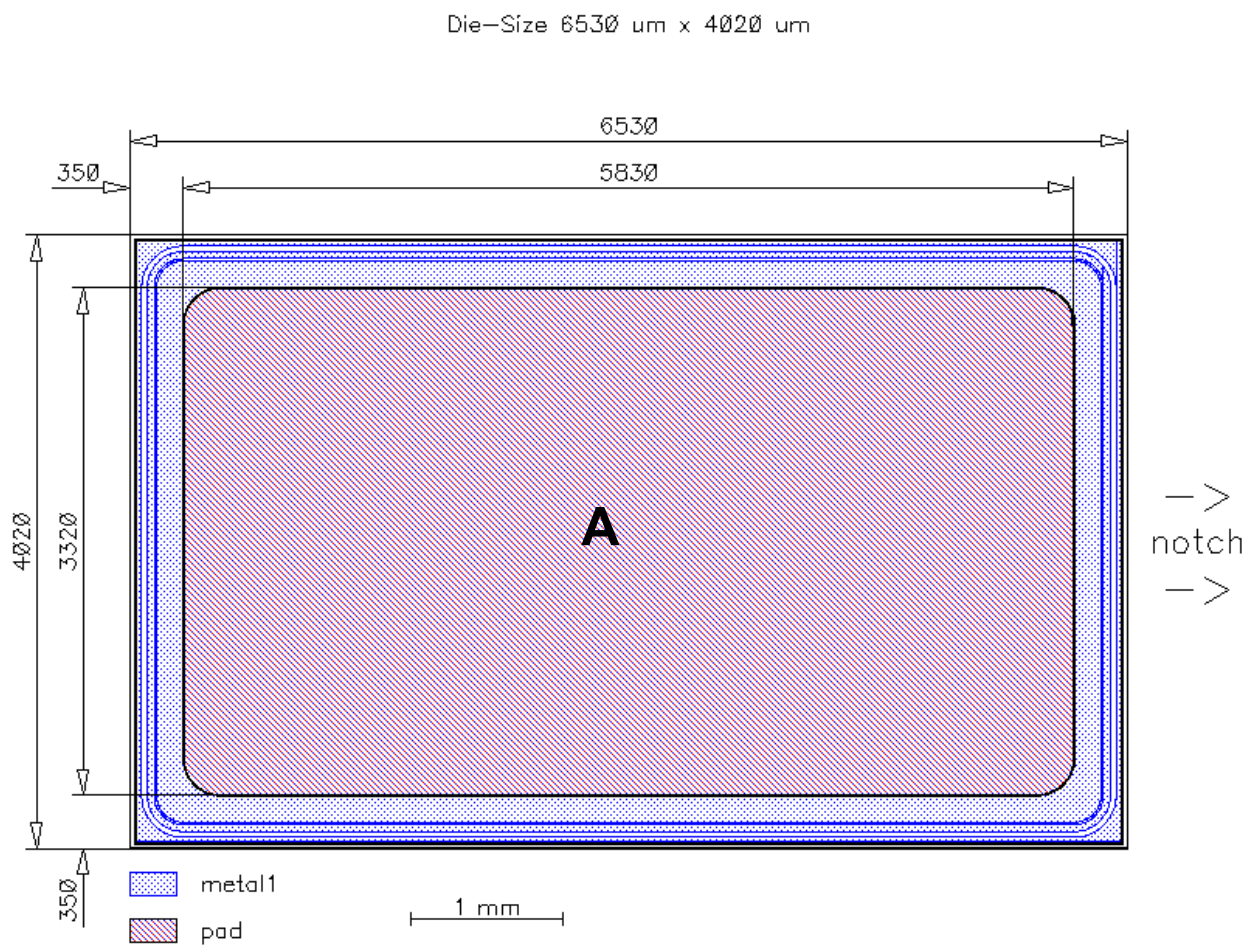
Further Electrical Characteristics

Switching characteristics and thermal properties are depending strongly on module design and mounting technology and can therefore not be specified for a bare die.

This chip data sheet refers to the device data sheet	FS100R07N3E4_B11	Rev. 2.0
--	------------------	----------

SIDC26D65C8

Chip Drawing



A: Anode pad



SIDC26D65C8

Description

AQL 0,65 for visual inspection according to failure catalogue

Electrostatic Discharge Sensitive Device according to MIL-STD 883

Revision History

Version	Subjects (major changes since last revision)	Date

Published by
Infineon Technologies AG
81726 Munich, Germany
© 2011 Infineon Technologies AG
All Rights Reserved.

Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

The Infineon Technologies component described in this Data Sheet may be used in life-support devices or systems and/or automotive, aviation and aerospace applications or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support, automotive, aviation and aerospace device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.