Preliminary

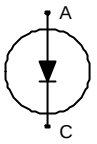
SIDC185D350FS

Fast switching diode chip in EMCONHV-Technology

FEATURES:
- 3500V EMCONHV technology
- soft , fast switching
- low reverse recovery charge
- small temperature coefficient

This chip is used for:
- power modules

Applications:
- traction drives



Chip Type	V_R	I_F	Die Size	Package	Ordering Code
SIDC185D350FS	3500V	100A	13.6 x 13.6 mm^2	sawn on foil	Q67041-A2227-A001

Mechanical parameter:

Raster size	13.6 x 13.6	mm
Anode pad size	9.76 x 9.76	
Area total / active	184.96 / 112.36	mm^2
Thickness	375	µm
Wafer size	150	mm
Flat position	180	deg
Max. possible chips per wafer	67	
Passivation frontside	Photoimide	
Anode metalization	3200 nm Al Si Cu	
Cathode metalization	1400 nm Ni Ag –system suitable for epoxy and soft solder die bonding	
Die bond	electrically conductive glue or solder	
Wire bond	Al, ≤500µm	
Reject Ink Dot Size	∅ 0.65mm	
Recommended Storage Environment	store in original container, in dry nitrogen, < 6 month at an ambient temperature of 23°C	

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Maximum Ratings, at T_j=25 °C, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	T_j = 25°C	3500	V
		T_j = -25°C	3300	
Continous forward current limited by T_{jmax}	I_F		100	A
Maximum repetitive forward current limited by T_{jmax}	I_{FRM}		200	
Operating junction and storage temperature	T_j , T_{stg}		-40...+125	°C

Static Electrical Characteristics (tested on chip at T_j=25 °C), unless otherwise specified:

Parameter	Symbol	Conditions	Value			Unit
			min.	Typ.	max.	
Reverse leakage current	I_R	V_R=3500V			250	µA
Forward voltage drop	V_F	I_F=100A		2.6	3.2	V

Dynamic Electrical Characteristics, at T_j = 125 °C, unless otherwise specified, tested at component

Parameter	Symbol	Conditions	Value			Unit
			min.	Typ.	max.	
Peak recovery current	I_{RRM}	I_F=100A di/dt=400 A/ms V_R=1800 V		100		A
Reverse recovery charge	Q_{rr}	I_F=100A di/dt=400 A/ms V_R=1800 V		100		µC
Rate of fall of reverse recovery current	di_{rr}/dt	I_F=100A di/dt=400 A/ms V_R=1800 V		400		A/µs
Max. Power dissipation during commutation	P_{RQM}			125		KW

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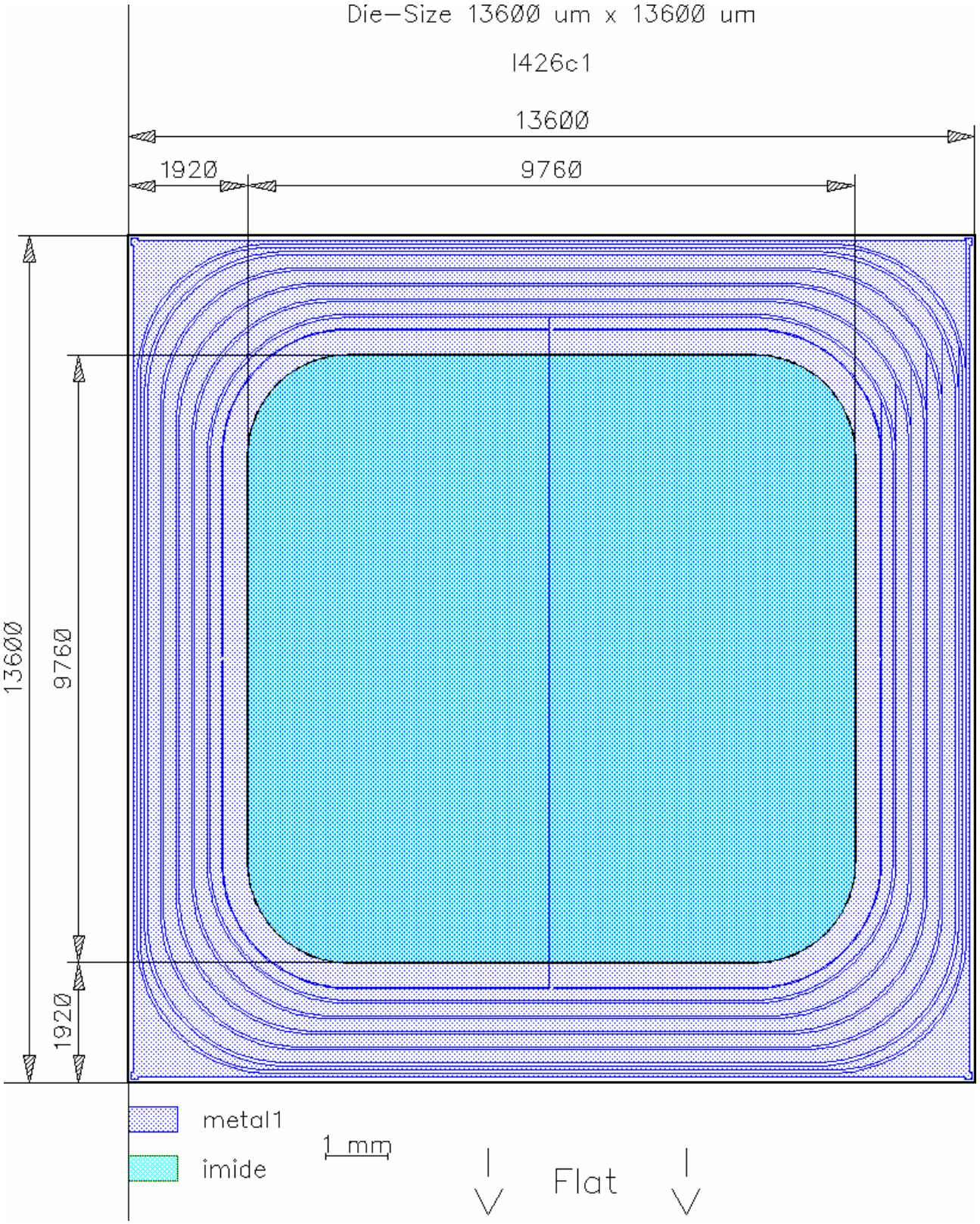
CHIP DRAWING:



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FURTHER ELECTRICAL CHARACTERISTICS:

This chip data sheet refers to the
device data sheet

Description:

AQL 0,65 for visual inspection according to failure catalog

Electrostatic Discharge Sensitive Device according to MIL-STD 883

Test-Normen Villach/Prüffeld

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Attention please!

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Infineon Technologies is an approved CECC manufacturer.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office in Germany or our Infineon Technologies Representatives worldwide (see address list).

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