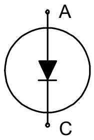
SIDC02D60F6

Fast switching diode

Features:
- 600V Emitter Controlled technology 70 µm chip
- soft , fast switching
- low reverse recovery charge
- small temperature coefficient

This chip is used for:
- power modules and discrete devices

Applications:
- SMPS, resonant applications, drives



Chip Type	V_R	I_F	Die Size	Package
SIDC02D60F6	600V	3A	1.3 x 1.3 mm^2	sawn on foil

Mechanical Parameters

Raster size	1.3 x 1.3	mm^2
Area total	1.69	
Anode pad size	0.818 x 0.818	
Thickness	70	µm
Wafer size	150	mm
Max. possible chips per wafer	9156	
Passivation frontside	Photoimide	
Pad metal	3200 nm AlSiCu	
Backside metal	Ni Ag –system suitable for epoxy and soft solder die bonding	
Die bond	Electrically conductive glue or solder	
Wire bond	Al, ≤250µm	
Reject ink dot size	∅ 0.65mm; max 1.2mm	
Recommended storage environment	Store in original container, in dry nitrogen, in dark environment, < 6 month at an ambient temperature of 23°C	

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Maximum Ratings

Parameter	**Symbol**	**Condition**	**Value**	**Unit**
Repetitive peak reverse voltage	V_{RRM}	T_{vj} = 25 °C	600	V
Continuous forward current	I_F	T_{vj} < 150°C	[1]	A
Maximum repetitive forward current	I_{FRM}	T_{vj} < 150°C	6	
Junction temperature range	T_{vj}		-40...+175	°C
Operating junction temperature	T_{vj}		-40...+150	°C
Dynamic ruggedness[2]	P_{max}	I_{Fmax} = 6A, V_{Rmax} = 600V, T_{vj} $\leq$ 150°C	tbd	kW

[1] depending on thermal properties of assembly

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

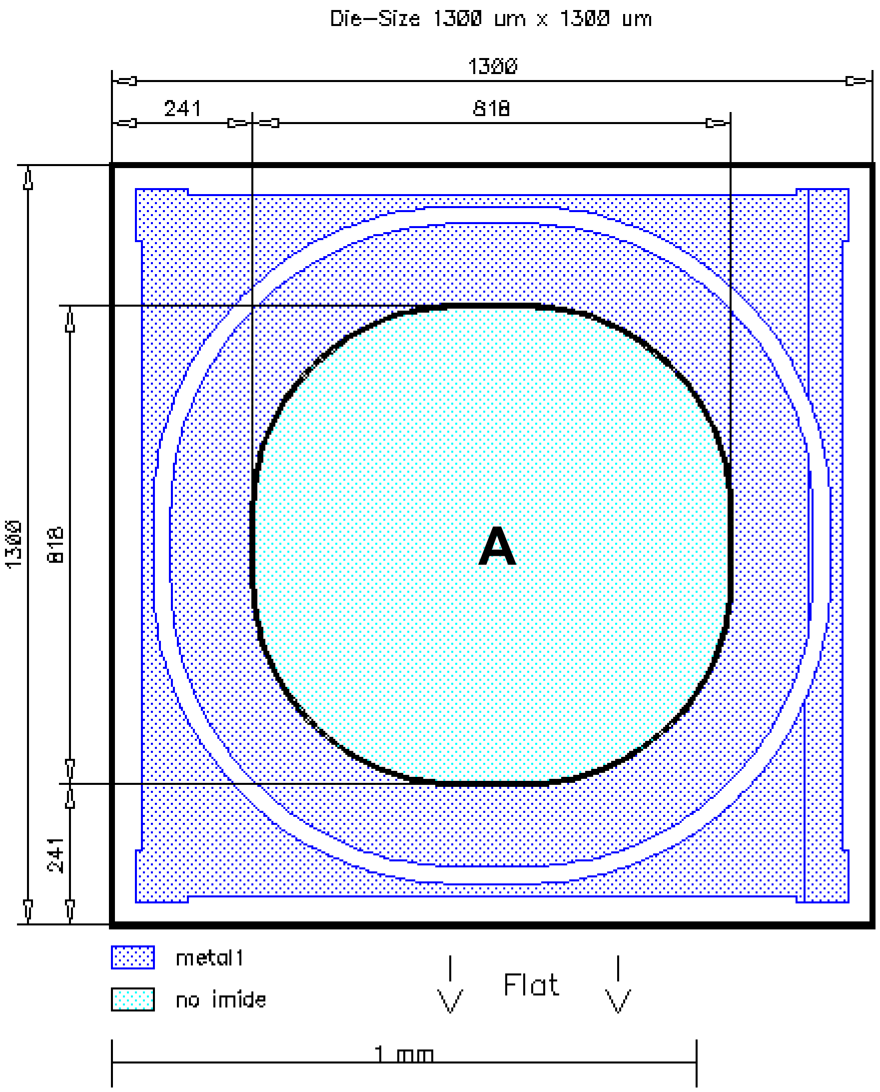
Static Characteristic (tested on wafer), T_{vj} = 25 °C

Parameter	**Symbol**	**Conditions**	**Value**			**Unit**
			min.	typ.	max.	
Reverse leakage current	I_R	V_R=600V			27	µA
Cathode-Anode breakdown Voltage	V_{BR}	I_R=0.5mA	600			V
Diode forward voltage	V_F	I_F=3A		1.6		V

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.

Chip Drawing



A: Anode pad

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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

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