Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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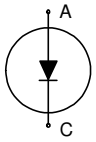
SIDC06D120F6

Fast switching diode chip in Emitter Controlled Technology

Features:
- 1200V technology 120 µm chip
- soft, fast switching
- low reverse recovery charge
- small temperature coefficient
- qualified according to JEDEC for target applications

Recommended for:
- power modules and discrete devices

Applications:
- SMPS, resonant applications, drives



Chip Type	V_R	I_{Fn}	Die Size	Package
SIDC06D120F6	1200V	5A	2.45 x 2.45 mm^2	sawn on foil

Mechanical Parameters

Die size		2.45 x 2.45	mm^2
Area total		6	
Anode pad size		1.73 x 1.73	
Thickness		120	µm
Wafer size		150	mm
Max. possible chips per wafer		2520	
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		∅ 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	

SIDC06D120F6

Maximum Ratings

Parameter	Symbol	Condition	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	T_{vj} = 25 °C	1200	V
Continuous forward current	I_F	T_{vj} < 150°C	1)	A
Maximum repetitive forward current2)	I_{FRM}	T_{vj} < 150°C	10	
Operating junction and storage temperature	T_{vj}, T_{stg}		-55...+150	°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 °C

Parameter	Symbol	Conditions	Value			Unit
			min.	typ.	max.	
Reverse leakage current	I_R	V_R=1200V			20	µA
Cathode-Anode breakdown Voltage	V_{BR}	I_R=0.25mA	1200			V
Forward voltage drop	V_F	I_F=5A	1.68	2.1	2.42	

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

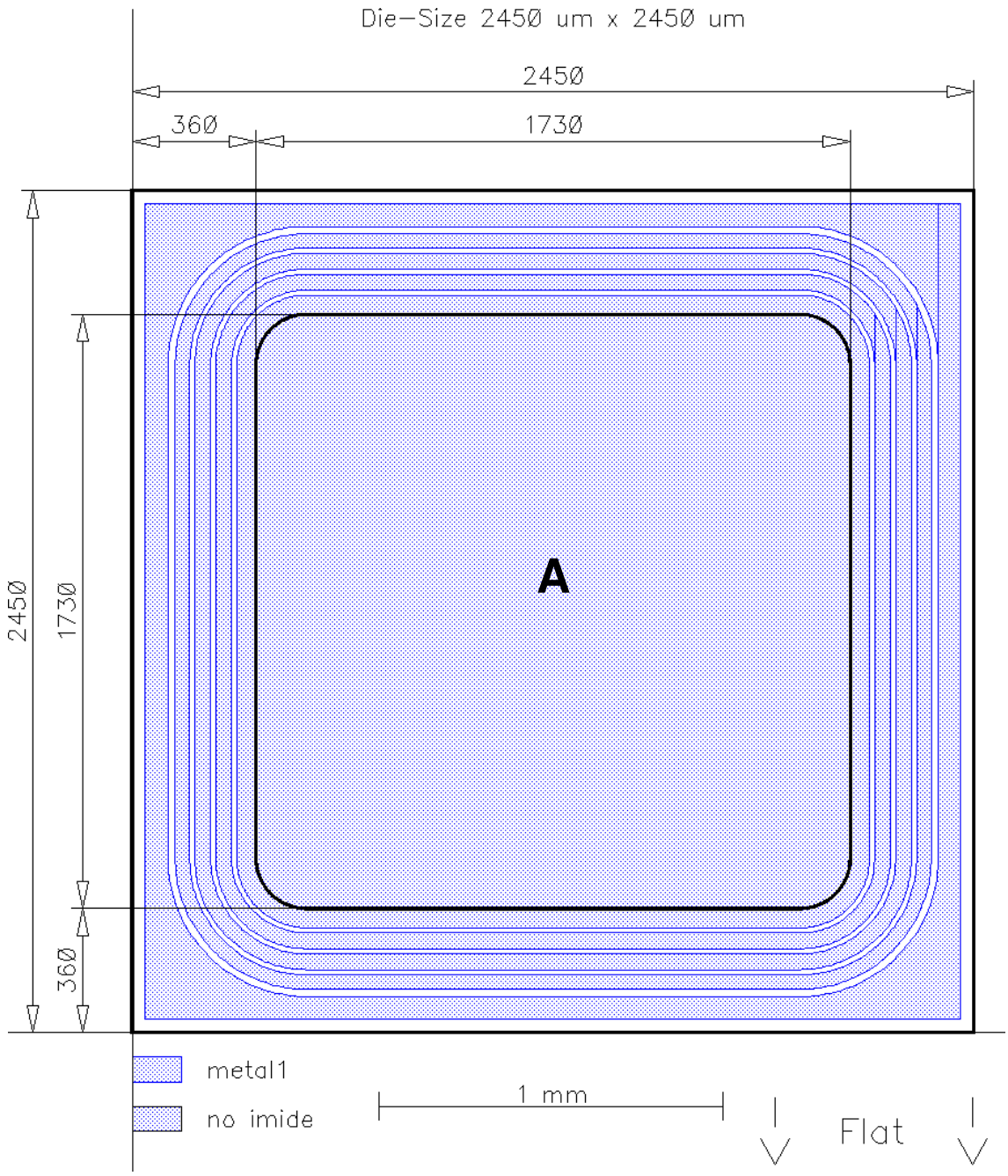
Parameter		Symbol	Conditions	Value			Unit
				min.	typ.	max.	
Forward voltage drop	T_{vj} = 125°C	V_F	I_F=5A		1.8		V

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.

This chip data sheet refers to the device data sheet		

Chip Drawing



A: Anode pad

SIDC06D120F6

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
2.0	Final data sheet	26.10.2012
2.1	Operating junction and storage temperature	14.05.2013

Published by
Infineon Technologies AG
81726 Munich, Germany

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