



SIDC14D120F6

Fast switching diode chip in EMCON-Technology

FEATURES:

- 1200V EMCON technology 120 µm chip
- soft, fast switching
- low reverse recovery charge
- small temperature coefficient

This chip is used for:

EUPEC power modules and discrete devices



Applications:

SMPS, resonant applications, drives

Chip Type	V_R	I _F	Die Size	Package	Ordering Code
SIDC14D120F6	1200V	15A	3.8 x 3.8 mm ²	sawn on foil	Q67050-A4170- A001

MECHANICAL PARAMETER:

Raster size	3.8 x 3.8				
Area total / active	14.44 / 9.8	mm^2			
Anode pad size	3.08 x 3.08				
Thickness	120	μm			
Wafer size	150	mm			
Flat position	180	deg			
Max. possible chips per wafer	1018 pcs				
Passivation frontside	Photoimide				
Anode metallisation	3200 nm AlSiCu				
Cathode metallisation	1400 nm Ni Ag –system suitable for epoxy and soft solder die bonding				
Die bond	electrically conductive glue or solder				
Wire bond	AI, ≤500μm				
Reject Ink Dot Size	∅ 0.65mm ; max 1.2mm				
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

Parameter	Symbol	Condition	Value	Unit
Repetitive peak reverse voltage	V_{RRM}		1200	V
Continuous forward current limited by	I _F		15	
T _{jmax}				A
Single pulse forward current (depending on wire bond configuration)	I _{FSM}	t_P = 10 ms sinusoidal	tbd	Α
Maximum repetitive forward current			30	
limited by T _{jmax}	I _{FRM}		30	
Operating junction and storage temperature	$T_{\rm j}$, $T_{ m stg}$		-55+150	°C

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

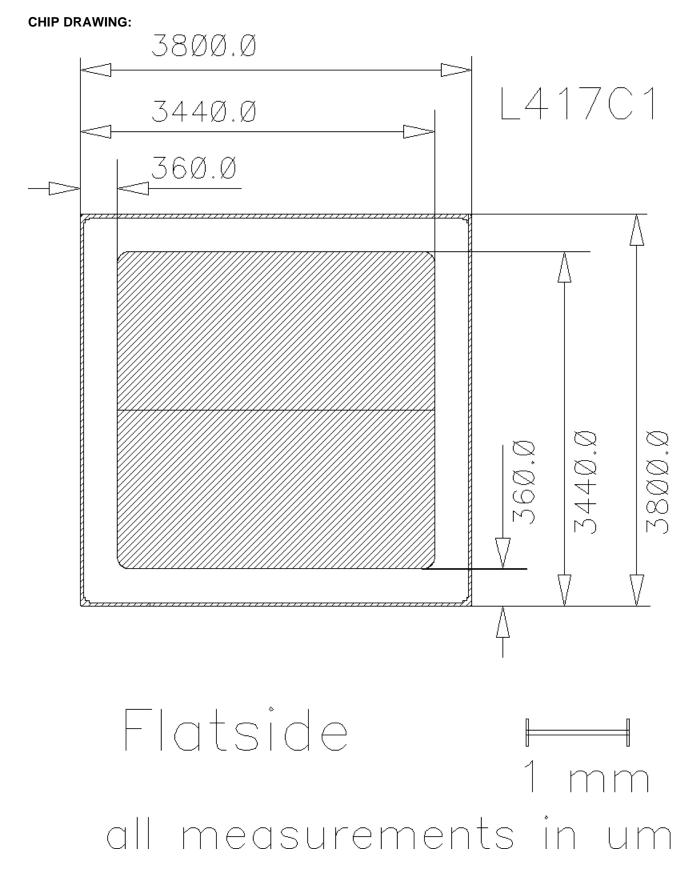
Parameter	Symbol	Cond	Value			Unit	
raiailietei	Syllibol	Conditions		min.	Тур.	max.	
Reverse leakage current	I_{R}	V _R =1200V	<i>T_j</i> =25 °C			27	μΑ
Cathode-Anode breakdown Voltage	V _{Br}	$I_R=1 mA$	<i>T_j</i> =25°C	1200			V
Forward voltage drop	V _F	I _F =15A	<i>T_j</i> =25°C		2.1		V

Dynamic Electrical Characteristics, at $T_j = 25$ °C, unless otherwise specified, tested at component

Parameter	Symbol	Conditions		Value			Unit
i arameter	Condit		itions	min.	Тур.	max.	
Reverse recovery time	t _{rr1}	I _F =15A	$T_j = 25$ °C		tbd		
	t _{rr2}	di/dt=A/ms $V_R=600V$	$T_j = 150$ °C				ns
Peak recovery current	I _{RRM1}	$I_F=15A$	$T_j = 25$ °C		tbd		A
	I _{RRM2}	di/dt = A/ms $V_R = 600V$	$T_j = 150$ °C				7^
Reverse recovery charge	Q_{rr1}	$I_F = 15A$ di/dt = A/ms	<i>T_j</i> =25 °C		tbd		n C
	Q _{rr2}	$V_R = 600V$	T _j =150°C				
Peak rate of fall of reverse recovery current	di _{rr1} /dt	I _F =15A	T _j =25°C		tbd		
	di _{rr2} /dt	di/dt=A/ms V _R = 600V	T _j =150°C				- A/μs
Softness	S1	$I_F=15A$ di/dt=A/ms	<i>T_j</i> =25 °C		tbd		1
	S2	$V_R = 600V$	T _j =150°C				<u> </u>



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Preliminary

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FURTHER ELECTRICAL CHARACTERISTICS:

This chip data sheet refers to the device data sheet line infine on technologies / EUPEC today today today today today to the line infine on technologies / EUPEC today today

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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