

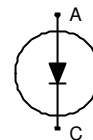
Diode EMCON 4 Medium Power Chip

FEATURES:

- 1200V EMCON 4 technology
- soft, fast switching
- low reverse recovery charge
- small temperature coefficient

This chip is used for:

- low / medium power modules



Applications:

- low / medium power drives

Chip Type	V _R	I _F	Die Size	Package
IDC10D120T6M	1200V	15A	3.30 x 2.98 mm ²	sawn on foil

MECHANICAL PARAMETER:

Raster size	3.30 x 2.98	mm ²
Area total / active	9.83 / 5.33	
Anode pad size	2.346 x 2.026	
Thickness	110	μm
Wafer size	150	mm
Flat position	180	deg
Max. possible chips per wafer	1531 pcs	
Passivation frontside	Photoimide	
Pad metall	3200 nm AlSiCu	
Backside metall	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	Ø 0.65mm; max 1.2mm	
Recommended storage environment	store in original container, in dry nitrogen, < 6 month at an ambient temperature of 23°C	



IDC10D120T6M

Maximum Ratings

Parameter	Symbol	Condition	Value	Unit
Repetitive peak reverse voltage	V_{RRM}		1200	V
Continuous forward current limited by T_{jmax}	I_F		1)	A
Maximum repetitive forward current limited by T_{jmax}	I_{FRM}		30	
Maximum junction and storage temperature	$T_{vj,max}$, T_{stg}		-40...+175	°C
Reverse bias safe operating area ²⁾ (RBSOA)	$I_{F,max} = 30A$, $V_{R,max} = 1200V$, $T_{vj,op} \leq 150^\circ C$, $P_{max} = \mathbf{tbd}$ kW			

1) depending on thermal properties of assembly

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

Static Electrical Characteristics (tested on wafer), $T_j=25^\circ C$

Parameter	Symbol	Conditions		Value			Unit
				min.	Typ.	max.	
Reverse leakage current	I_R	$V_R=1200V$	$T_j=25^\circ C$			3.5	μA
Cathode-Anode breakdown Voltage	V_{Br}	$I_R=0.25mA$	$T_j=25^\circ C$	1200			V
Forward voltage drop	V_F	$I_F=15A$	$T_j=25^\circ C$	1.35	1.7	2.05	V

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

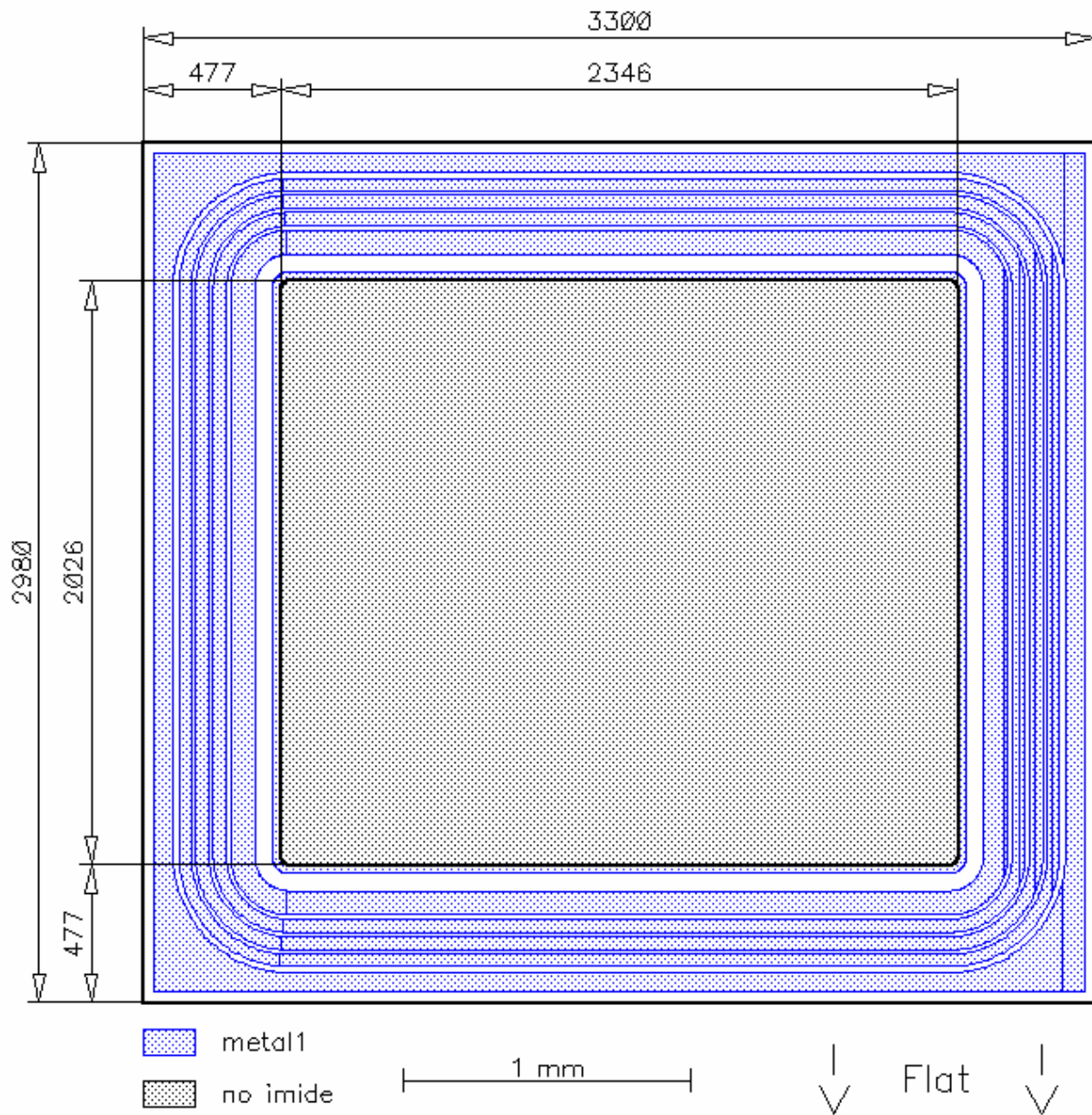
Parameter	Symbol	Conditions		Value ²⁾			Unit
				min.	Typ.	max.	
Peak reverse recovery current	I_{RM}	$I_F=A$ $di/dt=A/\mu s$ $V_R=V$ $V_{GE}=-15V$	$T_j = 25^\circ C$ $T_j = 125^\circ C$ $T_j = 150^\circ C$		tbd		A
Reverse recovery charge	Q_r	$I_F=A$ $di/dt=A/\mu s$ $V_R=V$ $V_{GE}=-15V$	$T_j = 25^\circ C$ $T_j = 125^\circ C$ $T_j = 150^\circ C$		tbd		μC
Reverse recovery energy	E_{rec}	$I_F=A$ $di/dt=A/\mu s$ $V_R=V$ $V_{GE}=-15V$	$T_j = 25^\circ C$ $T_j = 125^\circ C$ $T_j = 150^\circ C$		tbd		mJ

2) values also influenced by parasitic L- and C- in measurement and package.

CHIP DRAWING:

L4668B

Die-Size 3300 um x 2980 um





IDC10D120T6M

FURTHER ELECTRICAL CHARACTERISTICS:

This chip data sheet refers to the device data sheet	tbd	
--	-----	--

Description:

AQL 0,65 for visual inspection according to failure catalog

Electrostatic Discharge Sensitive Device according to MIL-STD 883

Test-Normen Villach/Prüffeld

Published by
Infineon Technologies AG
81726 Munich, Germany
© Infineon Technologies AG 2007
All Rights Reserved

Attention please!

The information herein is given to describe certain components and shall not be considered as warranted characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

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 world-wide (see address list).

Warnings

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

Infineon Technologies components may only be used in life-support devices or systems 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 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.