IXYS Diode Chip DMLP 15-03

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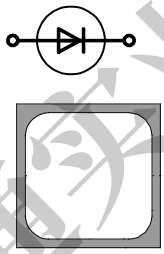
Type	Ag* Al*	V_{RRM} [V]	I_F [A]	Chip Size [mm] x [mm]		Package
DMLP 15	☐ ☑	300	40	3.90	3.90	sawn on foil ☑ unsawn wafer ☑* in waffle pack ☑

*Frontside options

*Please contact IXYS chip sales



Mechanical Parameters

Area active		12.25	mm²
Area total		15.21	mm²
Wafer size Ø		150	mm
Thickness		250	µm
Material		Si	
Max. possible chips per wafer		970	
Passivation front side		Polyimide	
Metallization top side	bondable:	Al	
Metallization backside	solderable (only):	Al / Ti / Ni / Ag*	
Recom. wire bonds (Al)	Anode Number	4	
	Ø	380	µm
Reject Ink Dot Size	Ø	0.4-1.0	mm
Recom. Storage Environment			
sawn on foil	in org. container, in dry nitrogen	< 6	month
unsawn wafer	in org. container, in dry nitrogen	< 2	year
in waffle pack	in org. container, in dry nitrogen	< 2	year
	T_{stg}	-40 ... 40	°C

*Sinterable top/bottom side on request

Features:

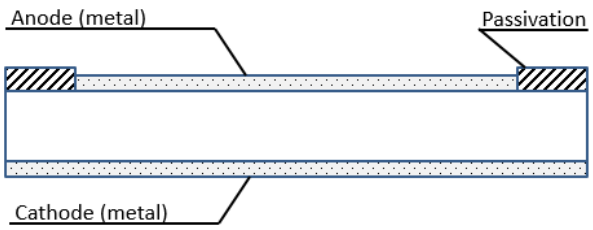
- Polyimide passivated
- Anode top
- Epitaxial diode
- Pt doped

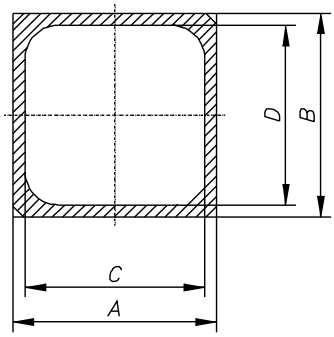
Applications

- Antiparallel diode for high frequency switching devices
- Antisaturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders
- PDP

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]
3.90	3.90	3.50	3.50





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Electrical parameters

Symbol		Conditions	Ratings min.	typ.	max.	
I_R		V = V_R = V_{RRM} T_{VJ} = 25°C			1	µA
		T_{VJ} = 150 °C			300	µA
V_F		I_F = 40 A T_{VJ} = 25°C			1.28	V
		T_{VJ} = 150°C			0.98	V
V_{F0}		For power-loss calculations only			0.7	V
r_F		T_{VJ} 175 °C			5	mΩ
T_{VJ}			-40		175	°C
$I_{F(AV)}$	*	T_C = 125 °C 180° rect. T_{VJ} = 175°C				A
I_{FSM}	*	T_{VJ} = 45°C t = 10 ms (50 Hz), sine			400	A
		V_R = 0 V t = 8.3 ms (60 Hz), sine			430	A
		T_{VJ} = 175 °C t = 10 ms (50 Hz), sine			350	A
		V_R = 0 V t = 8.3 ms (60 Hz), sine			370	A
I^2t	*	T_{VJ} = 45°C t = 10 ms (50 Hz), sine			800	A^2s
		V_R = 0 V t = 8.3 ms (60 Hz), sine			770	A^2s
		T_{VJ} = 175 °C t = 10 ms (50 Hz), sine			610	A^2s
		V_R = 0 V t = 8.3 ms (60 Hz), sine			570	A^2s
E_{AS}	*	I_{AS} = A; L = 100 µH; T_{VJ} = 25°C; non repetitive			tbd	mJ
I_{AR}	*	V_A = 1.5 · V_{RRM} typ.; f = 10 kHz; repetitive			tbd	A
R_{thJC}	*	DC current			1.1	K/W
t_{rr}		V_R = 100 V; I_F = 40 A; -di_F/dt = 200 A/µs T_{VJ} = 25°C		35		ns
I_{RM}		V_R = 100 V; I_F = 40 A; -di_F/dt = 200 A/µs T_{VJ} = 25°C		3		A

* Data according to assembled Chip

Data according to IEC 60747

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- the conclusion of quality agreements;

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