IXYS Diode Chip DWLP 23-12

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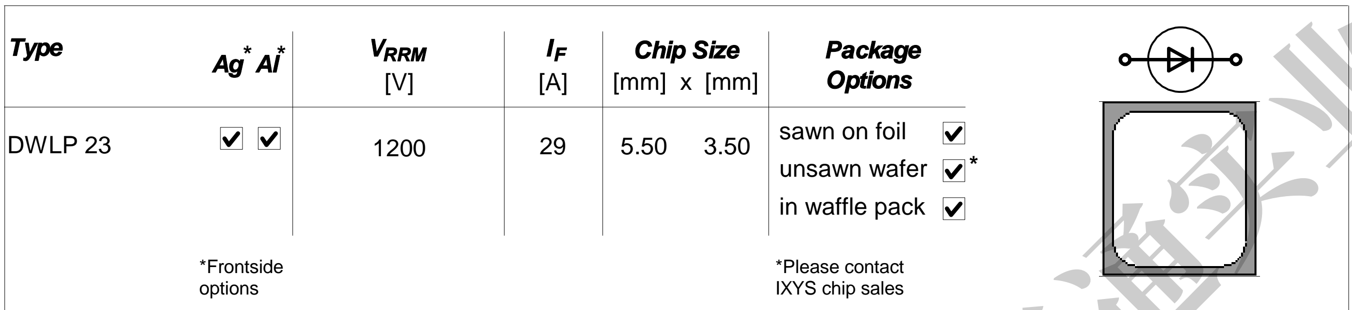


Type	Ag*	Al*	V_{RRM} [V]	I_F [A]	Chip Size [mm] x [mm]	Package Options
DWLP 23	✓	✓	1200	29	5.50 x 3.50	sawn on foil ✓ unsawn wafer ✓* in waffle pack ✓

*Frontside options

*Please contact IXYS chip sales

Mechanical Parameters

Parameter		Value	Unit
Area active		11.08	mm²
Area total		19.25	mm²
Wafer size Ø		150	mm
Thickness		425	µm
Material		Si	
Max. possible chips per wafer		770	
Passivation front side		Glass	
Metallization top side		bondable or solderable	
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:

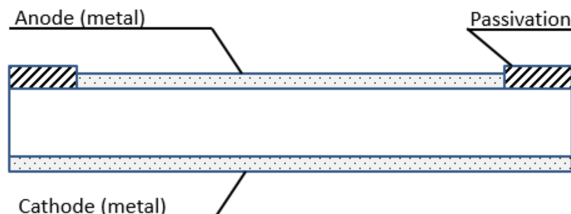
- Anode top
- Pt doped
- Epitaxial diode
- Planar surface
- Glass passivated

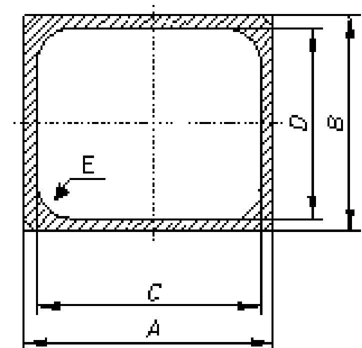
Applications:

- 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]	E [mm]
5.50	3.50	4.50	2.50	0.20





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Electrical parameters

Symbol	Conditions		min.	typ.	max.	
I_R	$V = V_{RRM}$	T_{VJ} = 25°C			10	µA
		T_{VJ} = 125°C			1	mA
V_F	I_F = 30 A	T_{VJ} = 25°C			2.69	V
		T_{VJ} = 150 °C			1.83	V
V_{F0}	For power-loss calculations only				1.12	V
r_F	T_{VJ} = 175 °C				13.50	mΩ
T_{VJ}			-55		175	°C
$I_{F(AV)}$ *	T_C = 125°C; 180° rect.				29	A
I_{FSM} *	T_{VJ} = 45°C; t = 10 ms (50 Hz), sine				200	A
R_{thJC} *	DC current				0.9	K/W
t_{rr}	V_R = 30	I_F = 1 A; $-di_F/dt$ = 200 A/µs; T_{VJ} = 25°C		120		ns
I_{RM}	V_R = 100	I_F = 50 A; $-di_F/dt$ = 100 A/µs; T_{VJ} = 25°C		5.00	6.70	A

* Data according to assembled Chip DSEP 30-12

Data according to IEC 60747

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- the conclusion of quality agreements;

- to establish joint measures to ensure application specific product capabilities and notify that IXYS may delivery dependent on the realization of any such measures.

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