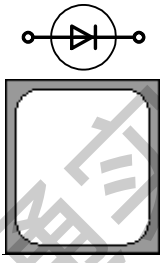


HiPer FRED

Type	Ag* Al*	V <sub>RRM</sub> [V]	I <sub>F</sub> [A]	Chip Size [mm] x [mm]	Package Options
DWLP 23	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	300	51	5.50 3.50	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in waffle pack <input checked="" type="checkbox"/>

\*Frontside options

\*Please contact IXYS chip sales



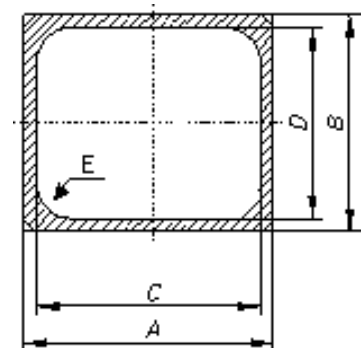
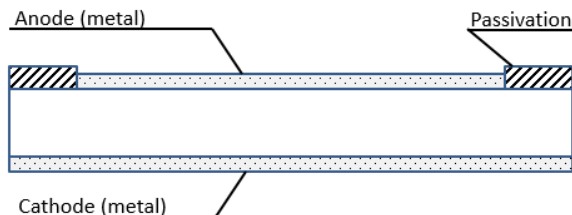
## Mechanical Parameters

Area active	11.08 mm <sup>2</sup>	<b>Features:</b> <ul style="list-style-type: none"> <li>• Anode top</li> <li>• Pt doped</li> <li>• Epitaxial diode</li> <li>• Planar surface</li> <li>• Glass passivated</li> </ul> <b>Applications:</b> <ul style="list-style-type: none"> <li>• Antiparallel diode for high frequency switching devices</li> <li>• Antisaturation diode</li> <li>• Snubber diode</li> <li>• Free wheeling diode in converters and motor control circuits</li> <li>• Rectifiers in switch mode power supplies (SMPS)</li> <li>• Inductive heating</li> <li>• Uninterruptible power supplies (UPS)</li> <li>• Ultrasonic cleaners and welders</li> <li>• PDP</li> </ul>
Area total	19.25 mm <sup>2</sup>	
Wafer size Ø	150 mm	
Thickness	345 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 <sub>stg</sub>	-40 ... 40 °C

\*Sinterable top/bottom side on request

## Dimensions

A	B	C	D	E
[mm]	[mm]	[mm]	[mm]	[mm]
5.50	3.50	4.50	2.50	0.20



## Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
$I_R$	$V = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			10 $\mu\text{A}$
				0.2 mA
$V_F$	$I_F = 30\text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1.19 V
				0.84 V
$V_{FO}$	For power-loss calculations only			0.63 V
$r_F$	$T_{VJ} = 175^\circ\text{C}$			4.50 m $\Omega$
$T_{VJ}$		-55		175 $^\circ\text{C}$
$I_{F(AV)}$ *	$T_C = 125^\circ\text{C}; 180^\circ\text{ rect.}$			51 A
$I_{FSM}$ *	$T_{VJ} = 45^\circ\text{C}; t = 10\text{ ms (50 Hz), sine}$			300 A
$R_{thJC}$ *	DC current			0.9 K/W
$t_{rr}$	$V_R = 30$ $I_F = 1\text{ A}; -di_F/dt = 200\text{ A}/\mu\text{s}; T_{VJ} = 25^\circ\text{C}$		30	ns
$I_{RM}$	$V_R = 100$ $I_F = 50\text{ A}; -di_F/dt = 100\text{ A}/\mu\text{s}; T_{VJ} = 25^\circ\text{C}$			3.00 A

\* Data according to assembled Chip

Data according to IEC 60747

## Terms of Conditions and Usage

The data contained in this product data sheet is exclusively intended for technically trained staff. The user will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to his application. The specifications of our components may not be considered as an assurance of component characteristics. Should you require product information in excess of the data given in this product data sheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you. Due to technical requirements our product may contain dangerous substances. For any information on the types in question please contact the sales office/partner, which is responsible for you.

Should you intend to use the product in aviation applications, in health or life endangering or life support applications, please notify. For any such applications we urgently recommend

- to perform joint risk and quality assessments;

- 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.