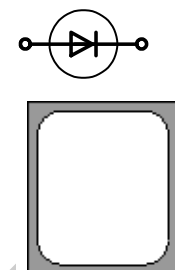


Type	Ag* Al*	V <sub>R<sub>RM</sub></sub> [V]	I <sub>F(AV)</sub> [A]	Chip Size [mm] x [mm]	Package
DMHP 19	<input type="checkbox"/> <input checked="" type="checkbox"/>	650	50	5.50 3.50	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in waffle pack <input checked="" type="checkbox"/>

\*Frontside options

\*Please contact IXYS chip sales

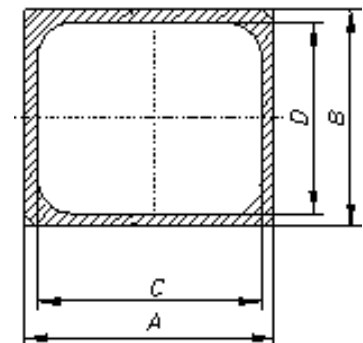
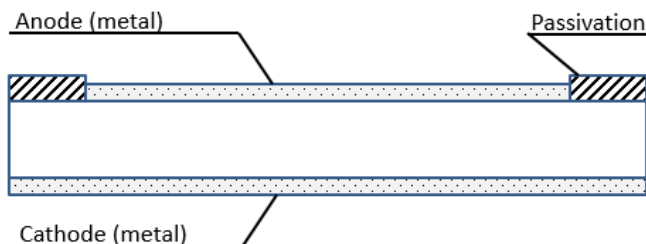


## Mechanical Parameters

Area active	13.80 mm <sup>2</sup>	<b>Features</b> <ul style="list-style-type: none"> <li>fast, soft SONIC diode</li> <li>low forward voltage drop</li> <li>small temperature coefficient</li> <li>low switching losses</li> <li>high ruggedness</li> <li>anode top</li> <li>T<sub>vjm</sub> = 175°C</li> </ul>	
Area total	19.25 mm <sup>2</sup>		
Wafer size Ø	150 mm		
Thickness	290 µm		
Material	Si		
Passivation front side	Polyimide		
Metallization top side	bondable: Al		
Metallization backside	solderable (only): Al / Ti / Ni / Ag		
Recom. wire bonds (Al)	Anode Number 8		
* = stitch bonds	Ø 380 µm		
Reject Ink Dot Size	Ø 0.4-1.0 mm	<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 and melting</li> <li>uninterruptible power supplies (UPS)</li> <li>ultrasonic cleaners and welders</li> </ul>	
Recom. soldering temp.	< 300 °C		
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		

## Dimensions

A	B	C	D
[mm]	[mm]	[mm]	[mm]
5.50	3.50	4.65	2.65



## 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	100	$\mu\text{A}$
			0.5		$\text{mA}$
$V_F$	$I_F = 50\text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$		1.70	2.00	V
			1.80		V
$V_{FO}$	For power-loss calculations only			1.15	V
$r_F$	$T_{VJ} = 175^\circ\text{C}$			18	$\text{m}\Omega$
$T_{VJ}$		-55		175	$^\circ\text{C}$
$I_{F(AV)}$ *	$T_C = 80^\circ\text{C}$ DC		45		A
$I_{FSM}$ *	$T_{VJ} = 45^\circ\text{C}$ $V = 0\text{ V}$			250	A
$R_{thJC}$ *	DC current			1.2	K/W
$Q_n$	$V = 300\text{ V};$ $I_F = 50\text{ A}$ $-di_F/dt = 900\text{ A}/\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$		2.5		$\mu\text{C}$
$I_{RM}$			40		A
$t_n$			100		ns
$E_{rec}$			0.6		mJ
$Q_n$			4.5		$\mu\text{C}$
$I_{RM}$	$V = 300\text{ V};$ $I_F = 50\text{ A}$ $-di_F/dt = 900\text{ A}/\mu\text{s}$ $T_{VJ} = 150^\circ\text{C}$		45		A
			150		ns
			1		mJ

\* Data according to assembled 380  $\mu\text{m}$  DCB

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.