

Type	Ag* Al*	V <sub>RRM</sub> [V]	I <sub>F</sub> [A]	Chip Size [mm] x [mm]	Package
DMLP 20	<input type="checkbox"/> <input checked="" type="checkbox"/>	300	60	4.45 4.45	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	16.40 mm <sup>2</sup>
Area total	19.80 mm <sup>2</sup>
Wafer size Ø	150 mm
Thickness	250 µm
Material	Si
Max. possible chips per wafer	780
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 <sub>stg</sub> -40 ... 40 °C

### Features:

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

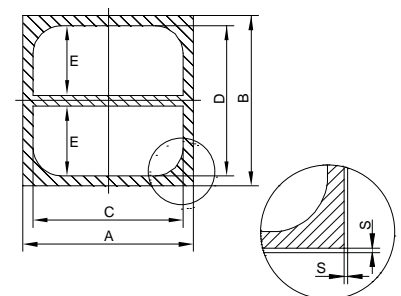
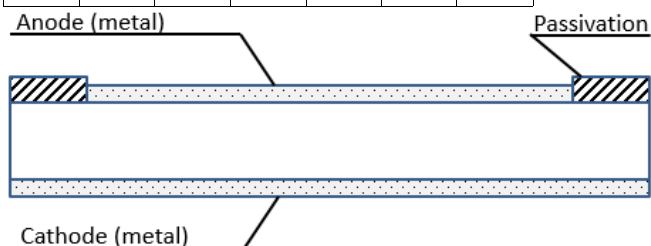
### Applications

- 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

\*Sinterable top/bottom side on request

## Dimensions

A	B	C	D	E	F	G
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
4.45	4.45	4.05	4.05	1.92		n/a



## Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
$I_R$	$V = V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1 $\mu\text{A}$
				350 $\mu\text{A}$
$V_F$	$I_F = 60 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1.28 V
				0.95 V
$V_{F0}$	For power-loss calculations only			0.7 V
$r_F$	$T_{VJ} = 175^\circ\text{C}$			4 m $\Omega$
$T_{VJ}$		-40		175 $^\circ\text{C}$
$I_{F(AV)}$ *	$T_C = 125^\circ\text{C}$ 180° rect. $T_{VJ} = 175^\circ\text{C}$			A
$I_{FSM}$ *	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine			550 A
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60 Hz), sine			600 A
	$T_{VJ} = 175^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine			460 A
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60 Hz), sine			510 A
$I^2 t$ *	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine			1510 A <sup>2</sup> s
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60 Hz), sine			1500 A s
	$T_{VJ} = 175^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine			1060 A <sup>2</sup> s
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60 Hz), sine			1080 A <sup>2</sup> s
$E_{AS}$ *	$I_{AS} = 9 \text{ A}$ ; $L = 100 \mu\text{H}$ ; $T_{VJ} = 25^\circ\text{C}$ ; non repetitive			tbd mJ
$I_{AR}$ *	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$ ; repetitive			tbd A
$R_{thJC}$ *	DC current			0.8 K/W
$t_T$	$V_R = 100 \text{ V}$ ; $I_F = 60 \text{ A}$ ; $-di_F/dt = 200 \text{ A}/\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$		35	ns
$I_{RM}$	$V_R = 100 \text{ V}$ ; $I_F = 60 \text{ A}$ ; $-di_F/dt = 200 \text{ A}/\mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$		3	A

\* Data according to assembled Chip

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.