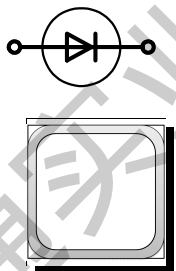


Type	Ag* Al*	V _{DRM} / V _{R_{RM}}	I _{F(AV)} [A]	Chip Size [mm] x [mm]	Package Options
DWN 21	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1800	42	5.40 5.40	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in waffle pack <input checked="" type="checkbox"/>

*Frontside options

*Please contact IXYS chip sales



Mechanical Parameters

Area active	17.50 mm ²
Area total	29.16 mm ²
Wafer size Ø	150 mm
Thickness	265 µm
Material	Si
Max. possible chips per wafer	468
Passivation front side	Glassivation
Metallization top side	solderable: Al / Ti / Ni / Ag *
top side	bondable: Al
Metallization backside	solderable (only): Al / Ti / Ni / Ag *
Recom. wire bonds (Al)	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	-40 ... 40 °C

Features

- with separation diffusion
- cathode top

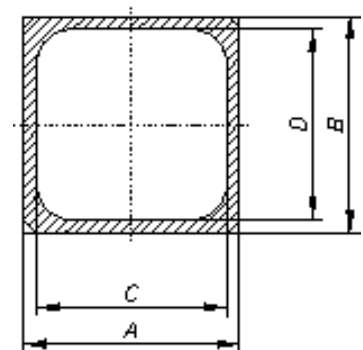
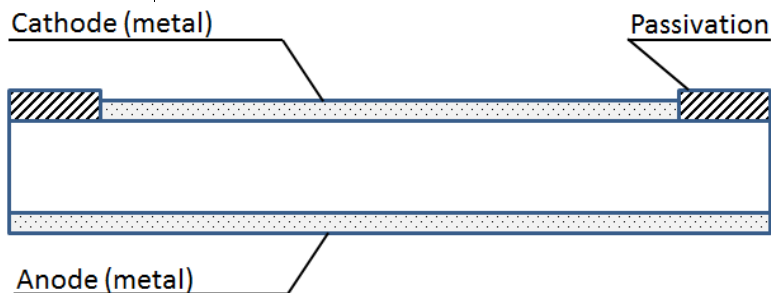
Applications

- DC Power Supplies
- Field Supply for DC motors
- Battery DC Power Supplies
- Power Rectifiers

*Sinterable top/bottom side on request

Dimensions

A	B	C	D
[mm]	[mm]	[mm]	[mm]
5.40	5.40	4.00	4.00



Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
V_D / V_R	$T_{VJ} = 25^\circ\text{C}$	1800		V
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$			20 μA
	$V_R = 0.8 \cdot V_{RRM}$ $T_{VJ} = 150^\circ\text{C}$			1.5 mA
V_F	$I_F = 80 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$			1.33 V
	$T_{VJ} = 150^\circ\text{C}$			1.31 V
V_{FO}	For power-loss calculations only			0.88 V
r_F	$T_{VJ} = 150^\circ\text{C}$			5.4 m Ω
T_{VJ}		-40		150 $^\circ\text{C}$
$I_{F(AV)}$ *	$T_C = 100 \text{ }^\circ\text{C}$ 180° rect. $T_{VJ} = 150^\circ\text{C}$		42	A
I_{FSM} *	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50) Hz, sine			600 A
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			650 A
	$T_{VJ} = 150^\circ\text{C}$ t = 10 ms (50) Hz, sine			520 A
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			570 A
$I^2 t$ *	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50) Hz, sine			1800 A s ²
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			1760 A s
	$T_{VJ} = 150^\circ\text{C}$ t = 10 ms (50) Hz, sine			1350 A s ²
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			1350 A s ²
R_{thJC} *	DC current			0.90 K/W

* 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.

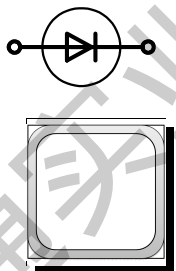
Should you intend to use the product in aviation applications, in health or life endangering or life support applications, please notify. For any such applications we urgently recommend

- 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.

Type	Ag* Al*	V _{DRM} / V _{RRM}	I _{F(AV)} [A]	Chip Size [mm] x [mm]	Package Options
DWN 21	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1800	42	5.40 5.40	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in wafile pack <input checked="" type="checkbox"/>

*Frontside options

*Please contact IXYS chip sales



Mechanical Parameters

Area active	17.50	mm ²
Area total	29.16	mm ²
Wafer size Ø	150	mm
Thickness	265	µm
Material	Si	
Max. possible chips per wafer	468	
Passivation front side	Glassivation	
Metallization top side	solderable: Al / Ti / Ni / Ag *	
top side	bondable: Al	
Metallization backside	solderable (only): Al / Ti / Ni / Ag *	
Recom. wire bonds (Al)	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 wafile pack	in org. container, in dry nitrogen	< 2 year
T	-40 ... 40	°C

Features

- with separation diffusion
- cathode top

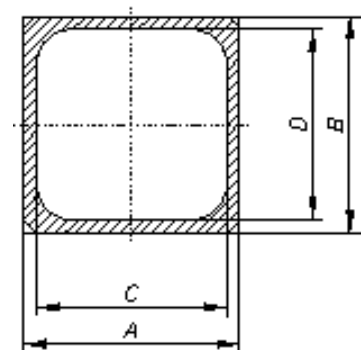
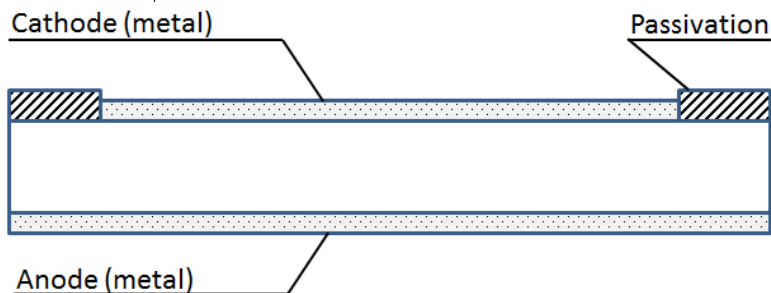
Applications

- DC Power Supplies
- Field Supply for DC motors
- Battery DC Power Supplies
- Power Rectifiers

*Sinterable top/bottom side on request

Dimensions

A	B	C	D
[mm]	[mm]	[mm]	[mm]
5.40	5.40	4.00	4.00



Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
V_D / V_R	$T_{VJ} = 25^\circ\text{C}$	1800		V
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$			20 μA
	$V_R = 0.8 \cdot V_{RRM}$ $T_{VJ} = 150^\circ\text{C}$			1.5 mA
V_F	$I_F = 80 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$			1.33 V
	$T_{VJ} = 150^\circ\text{C}$			1.31 V
V_{FO}	For power-loss calculations only			0.88 V
r_F	$T_{VJ} = 150^\circ\text{C}$			5.4 m Ω
T_{VJ}		-40		150 $^\circ\text{C}$
$I_{F(AV)}$ *	$T_C = 100 \text{ }^\circ\text{C}$ 180° rect. $T_{VJ} = 150^\circ\text{C}$		42	A
I_{FSM} *	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50) Hz, sine			600 A
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			650 A
	$T_{VJ} = 150^\circ\text{C}$ t = 10 ms (50) Hz, sine			520 A
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			570 A
$I^2 t$ *	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50) Hz, sine			1800 A s ²
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			1760 A s
	$T_{VJ} = 150^\circ\text{C}$ t = 10 ms (50) Hz, sine			1350 A s ²
	$V_R = 0 \text{ V}$ t = 8.3 ms (60) Hz, sine			1350 A s ²
R_{thJC} *	DC current			0.90 K/W

* Data according to assembled Chip

(solderable)

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.