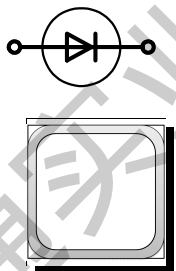


Type	Ag* Al*	V _{DRM} / V _{RRM}	I _{F(AV)} [A]	Chip Size [mm] x [mm]	Package Options
DWN 21	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	1600	42	5.40 5.40	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in waffle pack <input 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

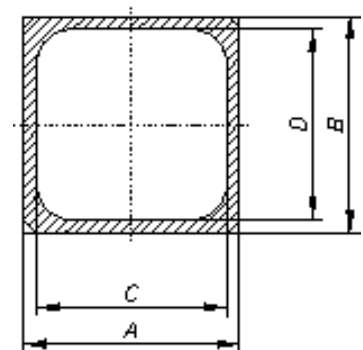
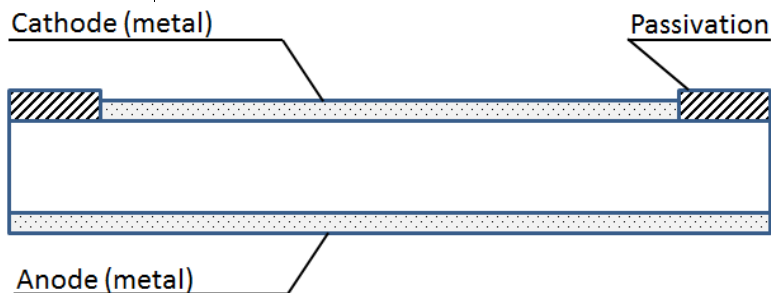
Applications

- 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	$T_{VJ} = 25^\circ\text{C}$	1600		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} *	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine			600 A
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine			650 A
	$T_{VJ} = 150^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine			520 A
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine			570 A
$I^2 t$ *	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine			1800 A s ²
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine			1760 A s
	$T_{VJ} = 150^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine			1350 A s ²
	$V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (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

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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.