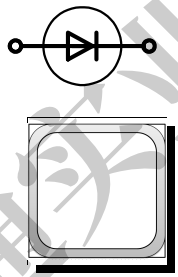
IXYS Diode Chip DWN 9-16

Type	Ag* Al*	V_{DRM} / V_{RRM}	$I_{F(AV)}$ [A]	Chip Size [mm] x [mm]	Package Options	
DWN 9	☑ ☑	1600	20	3.90 3.90	sawn on foil	☑
					unsawn wafer	☑ *
					in waffle pack	☑

*Frontside options

*Please contact IXYS chip sales



Mechanical Parameters

Area active		7.79	mm²
Area total		15.21	mm²
Wafer size Ø		150	mm
Thickness		265	µm
Material		Si	
Max. possible chips per wafer		923	
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

*Sinterable top/bottom side on request

Features

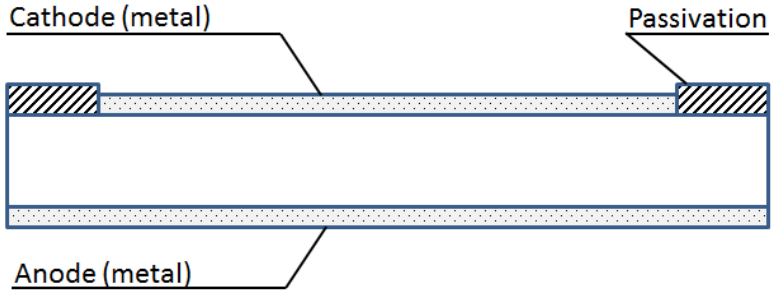
- with separation diffusion
- cathode top

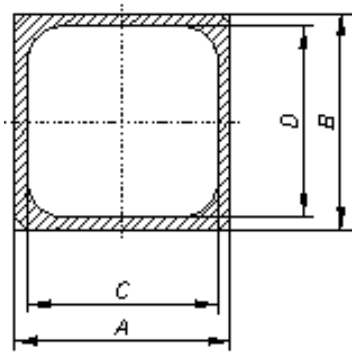
Applications

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

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]
3.90	3.90	2.60	2.60





Electrical parameters

Symbol	Conditions		Ratings min.	typ.	max.	
V_D / V_R	T_{VJ} = 25°C		1600			V
I_R	$V_R = V_{RRM}$	T_{VJ} = 25°C			10	µA
	$V_R = 0.8 \cdot V_{RRM}$	T_{VJ} = 150°C			1	mA
V_F	I_F = 30 A	T_{VJ} = 25°C			1.29	V
		T_{VJ} = 125°C			1.31	V
V_{F0}	For power-loss calculations only				0.86	V
r_F	T_{VJ} = 150°C				12.3	mΩ
T_{VJ}			-40		150	°C
$I_{F(AV)}$ *	T_C = 100 °C	180° rect. T_{VJ} = 150°C		20		A
I_{FSM} *	T_{VJ} = 45°C	t = 10 ms (50) Hz, sine			270	A
	V_R = 0 V	t = 8.3 ms (60) Hz, sine			290	A
	T_{VJ} = 150°C	t = 10 ms (50) Hz, sine			230	A
	V_R = 0 V	t = 8.3 ms (60) Hz, sine			250	A
I^2t *	T_{VJ} = 45°C	t = 10 ms (50) Hz, sine			360	A s^2
	V_R = 0 V	t = 8.3 ms (60) Hz, sine			350	A s
	T_{VJ} = 150°C	t = 10 ms (50) Hz, sine			260	A s^2
	V_R = 0 V	t = 8.3 ms (60) Hz, sine			260	A s^2
R_{thJC} *	DC current				1.80	K/W

* Data according to assembled Chip

Data according to IEC 60747

Note: I_FSM value depends on method of assembly

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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.