IXYS Diode Chip DWPJ 49-16AL

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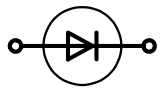
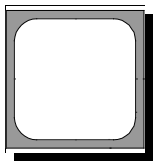
Type	V_{RRM}	$I_{F(AV)}$ [A]	Chip Size [mm] x [mm]		Package Options	
DWPJ 49 AL	**1600**	**75**	**7.00**	**7.00**	sawn on foil	☑
					in waffle pack	☑





Mechanical Parameters

Area active		37.13	mm^2
Area total		49.00	mm^2
Wafer size Ø		150	mm
Thickness		265	µm
Material		Si	
Max. possible chips per wafer		267	
Passivation front side		Glassivation	
Metallization top side	bondable:	Al	
Metallization backside	solderable (only):	Al / Ti / Ni / Ag	*
Recom. wire bonds (Al)	Number	8	
	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	months
unsawn wafer	in org. container, in dry nitrogen	< 2	years
in waffle pack	in org. container, in dry nitrogen	< 2	years
Recom. storage temperature		-40 ... 40	°C

Features

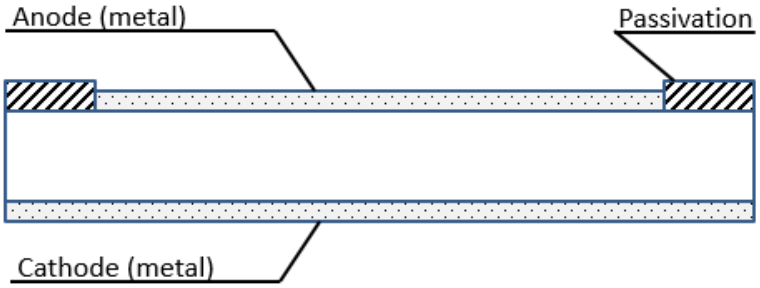
- advanced planar technology
- anode top
- glassivation
- soft recovery rectifier diode
- high commutation robustness

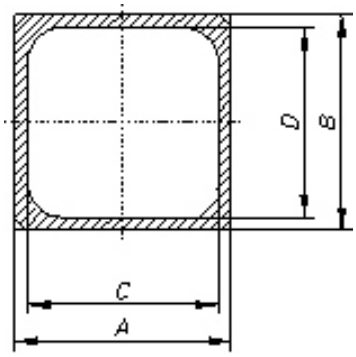
Applications

- DC power supplies
- field supply for DC motors
- battery DC power supplies
- power rectifiers
- input rectifier

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]
7.00	7.00	6.02	6.02





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Electrical parameters

Symbol	Conditions					Ratings min.	typ.	max.	
V_{RRM}	T_{VJ} = 25°C					1600			V
I_R	$V_R = V_{RRM}$	T_{VJ} = 25°C						20	µA
	V_R = 0.8·V_{RRM}	T_{VJ} = 150°C						2.5	mA
V_F	I_F = 75 A	T_{VJ} = 25°C					1.23		V
		T_{VJ} = 150°C					1.17		V
$V_{F0, max}$	Maximum forward voltage range								V
$r_{F, max}$	T_{VJ} = 25 °C	0.5·$I_{F(AV)}$ < I_F < 2·$I_{F(AV)}$							mΩ
di/dt	T_{VJ} = 25°C	V_{DC} = 600V	I_F = 2·$I_{F(AV)}$	$L_{S, max}$ = 1.3 µH	$V_{R, max}$ = 850 V			200	A/µs
	T_{VJ} = 150°C	V_{DC} = 600V	I_F = 2·$I_{F(AV)}$	$L_{S, max}$ = 1.3 µH	$V_{R, max}$ = 850 V			200	A/µs
T_{VJ}						-40		150	°C
$I_{F(AV)}$ *	T_C = 100 °C	180° rect.	T_{VJ} = 150°C				75		A
I_{FSM} *	T_{VJ} = 25°C	t = 10 ms (50) Hz, sine						1150	A
	V_R = 0 V	t = 8.3 ms (60) Hz, sine						1100	A
	T_{VJ} = 150°C	t = 10 ms (50) Hz, sine						900	A
	V_R = 0 V	t = 8.3 ms (60) Hz, sine						850	A
I^2t *	T_{VJ} = 25°C	t = 10 ms (50) Hz, sine						6610	A^2s
	V_R = 0 V	t = 8.3 ms (60) Hz, sine						5040	A^2s
	T_{VJ} = 150°C	t = 10 ms (50) Hz, sine						4050	A^2s
	V_R = 0 V	t = 8.3 ms (60) Hz, sine						3010	A^2s
R_{thJC} *	DC current							0.50	K/W
* Data according to assembled Chip		VHFD (bondable)						Data according to IEC 60747	
V_{br}	T_{VJ} = 25°C					1740			V
	T_{VJ} = 150°C					1800			V
I_{RSM}	Avalanche capability							5	mA

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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.

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