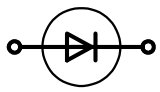
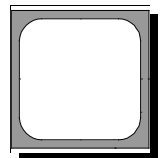


Type	V _{RRM}	I _{F(AV)} [A]	Chip Size [mm] x [mm]	Package Options
DWPJ 31-16 AL	1600	40	5.6 5.6	sawn on foil <input checked="" type="checkbox"/> in wafer pack <input checked="" type="checkbox"/>

Mechanical Parameters

Area active	21.16	mm ²
Area total	31.36	mm ²
Wafer size Ø	150	mm
Thickness	265	µm
Material	Si	
Max. possible chips per wafer	426	
Passivation front side	Glassivation	
Metallization top side	bondable: Al	
Metallization backside	solderable (only): Al / Ti / Ni / Ag *	
Recom. wire bonds (Al)	Number 6	
	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 wafer pack	in org. container, in dry nitrogen	< 2 years
Recom. storage temperature	-40 ... 40	°C

Features

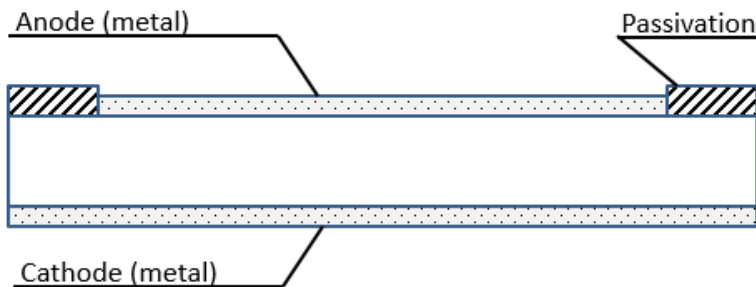
- advanced planar technology
- anode top
- glassivation
- soft recovery rectifier diode
- high commutation robustness

Applications

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

Dimensions

A	B	C	D
[mm]	[mm]	[mm]	[mm]
5.6	5.6	4.60	4.60



Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
V_{RRM}	$T_{VJ} = 25^{\circ}\text{C}$	1600		V
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^{\circ}\text{C}$			150 μA
	$V_R = 0.8 \cdot V_{RRM}$ $T_{VJ} = 150^{\circ}\text{C}$			1 mA
V_F	$I_F = 40$ A $T_{VJ} = 25^{\circ}\text{C}$		1.02	V
	$T_{VJ} = 150^{\circ}\text{C}$		0.92	V
$V_{F0, \max}$	Maximum forward voltage range			1.00 V
$r_{F, \max}$	$T_{VJ} = 25^{\circ}\text{C}$ $0.5 \cdot I_{F(AV)} < I_F < 2 \cdot I_{F(AV)}$			2.4 m Ω
di/dt	$T_{VJ} = 25^{\circ}\text{C}$ $V_{DC} = 600\text{V}$ $I_F = 2 \cdot I_{F(AV)}$ $L_{S, \max} = 1.3 \mu\text{H}$ $V_{R, \max} = 850$ V			200 A/ μs
	$T_{VJ} = 150^{\circ}\text{C}$ $V_{DC} = 600\text{V}$ $I_F = 2 \cdot I_{F(AV)}$ $L_{S, \max} = 1.3 \mu\text{H}$ $V_{R, \max} = 850$ V			200 A/ μs
T_{VJ}		-40		150 $^{\circ}\text{C}$
$I_{F(AV)}$ *	$T_C = 100^{\circ}\text{C}$ 180° rect. $T_{VJ} = 150^{\circ}\text{C}$		40	A
I_{FSM} *	$T_{VJ} = 25^{\circ}\text{C}$ $t = 10$ ms (50) Hz, sine			750 A
	$V_R = 0$ V $t = 8.3$ ms (60) Hz, sine			700 A
	$T_{VJ} = 150^{\circ}\text{C}$ $t = 10$ ms (50) Hz, sine			600 A
	$V_R = 0$ V $t = 8.3$ ms (60) Hz, sine			580 A
I^2t *	$T_{VJ} = 25^{\circ}\text{C}$ $t = 10$ ms (50) Hz, sine			2810 A ² s
	$V_R = 0$ V $t = 8.3$ ms (60) Hz, sine			2040 A ² s
	$T_{VJ} = 150^{\circ}\text{C}$ $t = 10$ ms (50) Hz, sine			1800 A ² s
	$V_R = 0$ V $t = 8.3$ ms (60) Hz, sine			1400 A ² s
R_{thJC} *	DC current			0.65 K/W
* Data according to assembled Chip VHFD (bondable)			Data according to IEC 60747	
V_{br}	$T_{VJ} = 25^{\circ}\text{C}$	1740		V
	$T_{VJ} = 150^{\circ}\text{C}$	1800		V
I_{RSM}	Avalanche capability			5 mA

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.