

Type	Ag* Al*	V_{DRM} / V_{RRM}	V_{DSM} / V_{RSM} [V]	$I_{T(AV)}$ [A]	Chip Size [mm] x [mm]	Package Options
CWP 347-18	<input checked="" type="checkbox"/> <input type="checkbox"/>	1800	1900	386	23.40 23.4	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	4.07	cm ²
Area total	5.48	cm ²
Wafer size Ø	150	mm
Thickness	380	µm
Material	Si	
Max. possible chips per wafer	21	
Passivation front side	Glassivation	
Metallization top side	solderable: Ti / Ni / Ag *	
top side	bondable: Al	
Recom. wire bonds (Al)	Cathode	Gate
Number / Ø [µm]	/	/
Metallization backside	solderable (only): Ti / Ni / Ag *	
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_{stg}	-40 ... 40	°C

Features

- planar design (non-mesa)
- ultra rugged for easy assembly (flat backside)
- excellent long term stability
- very low leakage current
- very low forward voltage drop

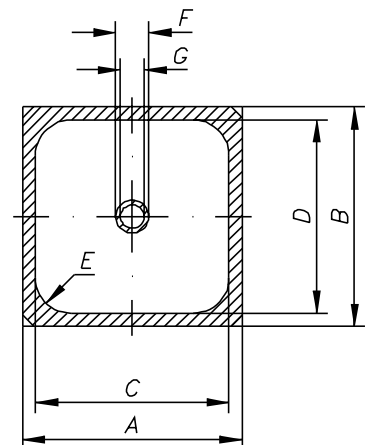
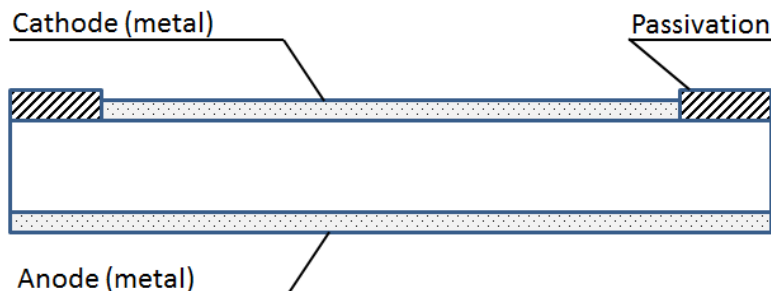
Applications

- DC motor control
- AC power control
- Softstart AC motor controller
- Light, heat and temperature control
- Solid state relays
- Controlled rectifier circuits

*Sinterable top/bottom side on request

Dimensions

A	B	C	D	E	F	G
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
23.40	23.40	20.80	20.80	3.90	3.50	2.50



Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
I_R	$V_D = V_r = V_{rr}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			0.5 mA 60 mA
V_T	$I_T = 600\text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1.16 V 1.11 V
V_{T0}	For power-loss calculations only			0.85 V
r_T	$T_{VJ} = 150^\circ\text{C}$			0.40 mΩ
V_{GT}	$V_D = 6\text{ V}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$			2 V 3 V
I_{GT}	$V_D = 6\text{ V}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	42		145 mA 220 mA
V_{GD}	$T_{VJ} = 150^\circ\text{C}$ $V = \frac{2}{3} V_{DRM}$			0.25 V
I_{GD}				10 mA
I_L	$t_p = 30\ \mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$ $I_G = 0.45\text{ A}$ $di_G/dt = 0.45\text{ A}/\mu\text{s}$			200 mA
I_H	$R_{GK} = \infty$ $T_{VJ} = 25^\circ\text{C}$ $V_D = 6\text{ V}$			150 mA
t_{gd}	$V_D = \frac{1}{2} V_{DRM}$ $T_{VJ} = 25^\circ\text{C}$ $I_G = 0.5\text{ A}$ $di_G/dt = 0.5\text{ A}/\mu$			2 μs
t_q	$V_R = 100\text{ V}$ $I_T = 600\text{ A}$ $-di/dt = 10\text{ A}/\mu\text{s}$ $t_p = 200\ \mu\text{s}$ $dv/dt = 50\text{ V}/\mu\text{s}$ $V_D = \frac{2}{3} V_{DRM}$ $T_{VJ} = 150^\circ\text{C}$			200 μs
$(di/dt)_{cr}$	repetitive $I_T = 750\text{ A}$ non repetitive $I_T = 386\text{ A}$ $V = \frac{2}{3} V_{DRM}$ $T_{VJ} = 150^\circ\text{C}$ $di_G/dt = 0.45\text{ A}/\mu\text{s}$ $I_G = 0.45\text{ A}$ $t_p = 200\ \mu\text{s}$ $f = 50\text{ Hz}$			100 A/μs A/μs
$(dv/dt)_{cr}$	$T_{VJ} = 150^\circ\text{C}$ $V_{DR} = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$ method 1 (linear voltage rise)			1000 V/μs
P_{GM}	$T_{VJ} = 150^\circ\text{C}$ $t_p = 30\ \mu\text{s}$ $t_p = 5E\ \mu\text{s}$			120 W 60 W
P_{GAV}				20 W
V_{RGM}				10 V
T_{VJ}		-40		150 °C
$I_{T(AV)}$	$T_C = 100^\circ\text{C}$ 180° rect. $T_{VJ} = \text{ °C}$ 180° sine			386 A tbd A
I_{TSM}^*	$T_{VJ} = 45^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine $T_{VJ} = 150^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine			9500 A 10300 A 8200 A 8900 A
$I^2 t^*$	$T_{VJ} = 45^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine $T_{VJ} = 150^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine			451250 A s ² 440274 A s ² 336200 A s ² 328722 A s ²
R_{thJC}^*	DC current		0.112	K/W

* Data according to assembled product

Data according to IEC 60747

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- 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.