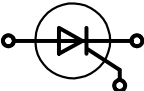
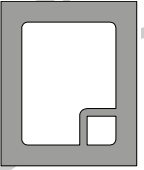


Type	Ag* Al*	V <sub>DRM</sub> / V <sub>RRM</sub>	V <sub>DSM</sub> / V <sub>RSM</sub> [V]	I <sub>T(AV)</sub> [A]	Chip Size [mm] x [mm]	Package Options	
CWP 52-12	<input type="checkbox"/> Ag <input checked="" type="checkbox"/> Al	1200	1300	97	13.00 9.77	sawn on foil <input checked="" type="checkbox"/> unsawn wafer <input checked="" type="checkbox"/> * in waffle pack <input checked="" type="checkbox"/>	
*Frontside options						*Please contact IXYS chip sales	

## Mechanical Parameters

Area active	0.69	cm <sup>2</sup>
Area total	1.27	cm <sup>2</sup>
Wafer size Ø	150	mm
Thickness	380	µm
Material	Si	
Max. possible chips per wafer	110	
Passivation front side	Glassivation	
Metallization top side	solderable: Ti / Ni / Ag *	
top side	bondable: Al	
Recom. wire bonds (Al)	Cathode	Gate
* = <i>Stitchbonds</i> Number / Ø [µm]	12* / 500	1 / 500
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 <sub>stg</sub>	-40 ...	40 °C

### Features

- planar passivated with guardring and channelstopper
- Planar front and back surface
- Non-structured anode contact on full area bottom side

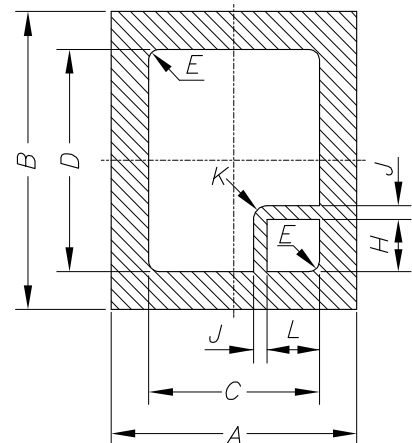
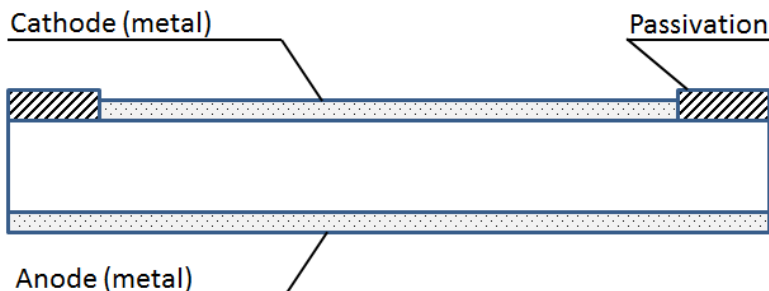
### Applications

- DC motor control
- AC power control
- Softstart AC motor controller
- Light, heat and temperature control

\*Sinterable top/bottom side on request

## Dimensions

A	B	C	D	E	H	J	K	L
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
13.00	9.77	7.20	10.50	0.34	1.50	0.40	0.40	1.50



## Electrical parameters

Symbol	Conditions	Ratings		
		min.	typ.	max.
$I_R$	$V_D = V_r = V_{rr}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			0.1 mA 20 mA
$V_T$	$I_T = 200\text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1.38 V 1.40 V
$V_{T0}$	For power-loss calculations only			0.9 V
$r_T$	$T_{VJ} = 150^\circ\text{C}$			2.40 mΩ
$V_{GT}$	$V_D = 6\text{ V}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$			1.5 V 1.6 V
$I_{GT}$	$V_D = 6\text{ V}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	27		95 mA 200 mA
$V_{GD}$	$T_{VJ} = 150^\circ\text{C}$ $V = \frac{2}{3} V_{DRM}$			0.2 V
$I_{GD}$				10 mA
$I_L$	$t_p = 10\ \mu\text{s}$ $T_{VJ} = 25^\circ\text{C}$ $I_G = 0.45\text{ A}$ $di_G/dt = 0.45\text{ A}/\mu\text{s}$			450 mA
$I_H$	$R_{GK} = \infty$ $T_{VJ} = 25^\circ\text{C}$ $V_D = 6\text{ V}$			200 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 $\mu\text{s}$
$t_q$	$V_R = 100\text{ V}$ $I_T = 150\text{ A}$ $-di/dt = 10\text{ A}/\mu\text{s}$ $t_p = 200\ \mu\text{s}$ $dv/dt = 20\text{ V}/\mu\text{s}$ $V_D = \frac{2}{3} V_{DRM}$ $T_{VJ} = 150^\circ\text{C}$		150	$\mu\text{s}$
$(di/dt)_{cr}$	repetitive $I_T = 150\text{ A}$ non repetitive $I_T = 97\text{ A}$ $V = \frac{2}{3} V_{DRM}$ $T_{VJ} = 150^\circ\text{C}$ $di_G/dt = 0.45\text{ A}/\mu\text{s}$ $I_G = 0.45\text{ A}$ $t_p = 200\ \mu\text{s}$ $f = 50\text{ Hz}$			150 A/ $\mu\text{s}$ 500 A/ $\mu\text{s}$
$(dv/dt)_{cr}$	$T_{VJ} = 150^\circ\text{C}$ $V_{DR} = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$ method 1 (linear voltage rise)			1000 V/ $\mu\text{s}$
$P_{GM}$	$T_{VJ} = 150^\circ\text{C}$ $t_p = 30\ \mu\text{s}$ $t_p = 3E\ \mu\text{s}$			10 W 5 W
$P_{GAV}$				0.5 W
$V_{RGM}$				10 V
$T_{VJ}$		-40		150 $^\circ\text{C}$
$I_{T(AV)}$	$T_C = 100^\circ\text{C}$ 180° rect. $T_{VJ} = 150^\circ\text{C}$ 180° sine			97 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			1500 A 1700 A
	$T_{VJ} = 150^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine			1300 A 1380 A
$I^2t^*$	$T_{VJ} = 45^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine			11250 A $\text{s}^2$ 11994 A $\text{s}^2$
	$T_{VJ} = 150^\circ\text{C}$ $t = 10\text{ ms}$ (50) Hz, sine $V_R = 0\text{ V}$ $t = 8.3\text{ ms}$ (60) Hz, sine			8450 A $\text{s}^2$ 7903 A $\text{s}^2$
$R_{thJC}^*$	DC current		0.38	K/W

\* Data according to assembled product tbd

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.