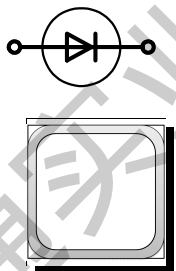


| Type | Ag* Al* | V _{DRM} / V _{R_{RM}} | I _{F(AV)} [A] | Chip Size [mm] x [mm] | Package Options |
|--------|---|--|------------------------|-----------------------|--|
| DWN 17 | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | 1600 | 31 | 4.45 4.45 | sawn on foil <input 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 | 10.42 | mm ² |
| Area total | 19.80 | mm ² |
| Wafer size Ø | 150 | mm |
| Thickness | 265 | µm |
| Material | Si | |
| Max. possible chips per wafer | 714 | |
| 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 |

Features

- with separation diffusion
- cathode top

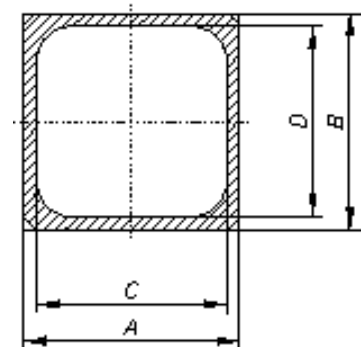
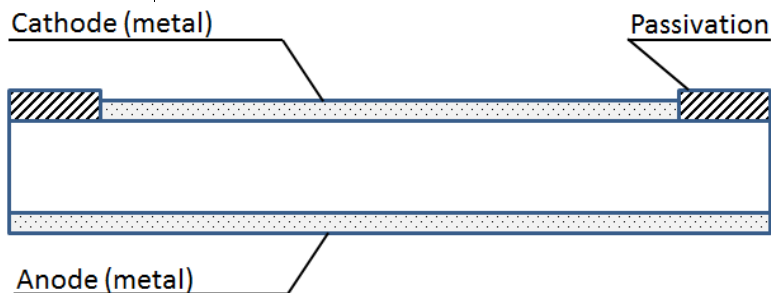
Applications

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

*Sinterable top/bottom side on request

Dimensions

| A | B | C | D |
|------|------|------|------|
| [mm] | [mm] | [mm] | [mm] |
| 4.45 | 4.45 | 3.05 | 3.05 |



Electrical parameters

| Symbol | Conditions | Ratings | | |
|---------------|--|---------|------|----------------------|
| | | min. | typ. | max. |
| V_D / V_R | $T_{VJ} = 25^\circ\text{C}$ | 1600 | | V |
| I_R | $V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$ | | | 20 μA |
| | $V_R = 0.8 \cdot V_{RRM}$ $T_{VJ} = 150^\circ\text{C}$ | | | 1.5 mA |
| V_F | $I_F = 50 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$ | | | 1.30 V |
| | $T_{VJ} = 125^\circ\text{C}$ | | | 1.33 V |
| V_{FO} | For power-loss calculations only | | | 0.88 V |
| r_F | $T_{VJ} = 150^\circ\text{C}$ | | | 9 m Ω |
| T_{VJ} | | -40 | | 150 $^\circ\text{C}$ |
| $I_{F(AV)}$ * | $T_C = 100 \text{ }^\circ\text{C}$ 180° rect. $T_{VJ} = 150^\circ\text{C}$ | | 31 | A |
| I_{FSM} * | $T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine | | | 320 A |
| | $V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine | | | 350 A |
| | $T_{VJ} = 150^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine | | | 280 A |
| | $V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine | | | 300 A |
| $I^2 t$ * | $T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine | | | 510 A s ² |
| | $V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine | | | 510 A s |
| | $T_{VJ} = 150^\circ\text{C}$ $t = 10 \text{ ms}$ (50) Hz, sine | | | 390 A s ² |
| | $V_R = 0 \text{ V}$ $t = 8.3 \text{ ms}$ (60) Hz, sine | | | 370 A s ² |
| R_{thJC} * | DC current | | | 1.10 K/W |

* Data according to assembled Chip

on DCB

Data according to IEC 60747

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.