advanced

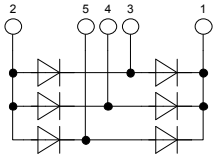
# Standard Rectifier Module

3~ Bipolar Bridge

$V_{RRM}$ = 1600 V
$I_{DAV}$ = 92 A
$V_F$ = 1 V

**Part number**

VUO84-16NO7




pending

**Features / Advantages:**

- Planar passivated chips
- Very low leakage current
- Very low forward voltage drop
- Improved thermal behaviour

**Applications:**

- Diode Bridge for main rectification

**Package:**

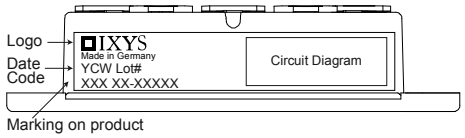
- Housing: PWS-D Flat
- Cu base plate internal DCB isolated
- Easy to mount with two screws
- RoHS compliant

**Ratings**

| Symbol | Definition | Conditions | | min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|---|
| $V_{RRM}$ | *max. repetitive reverse voltage* | | $T_{VJ}$ = 25°C | | | 1600 | V |
| $I_R$ | *reverse current* | $V_R$ = 1600 V | $T_{VJ}$ = 25°C | | | 100 | µA |
| | | $V_R$ = 1600 V | $T_{VJ}$ = 150°C | | | 1.5 | mA |
| $V_F$ | *forward voltage* | $I_F$ = 30 A | $T_{VJ}$ = 25°C | | | 1.10 | V |
| | | $I_F$ = 60 A | | | | 1.22 | V |
| | | $I_F$ = 30 A | $T_{VJ}$ = 125°C | | | 1.00 | V |
| | | $I_F$ = 60 A | | | | 1.20 | V |
| $I_{DAV}$ | *bridge output current* | 120° sine | $T_C$ = 115°C | | | 92 | A |
| $V_{F0}$ | *threshold voltage* } *for power loss calculation only* | | $T_{VJ}$ = 150°C | | | 0.78 | V |
| $r_F$ | *slope resistance* } | | | | | 6.6 | mΩ |
| $R_{thJC}$ | *thermal resistance junction to case* | | | | | 0.75 | K/W |
| $T_{VJ}$ | *virtual junction temperature* | | | -40 | | 150 | °C |
| $P_{tot}$ | *total power dissipation* | | $T_C$ = 25°C | | | 160 | W |
| $I_{FSM}$ | *max. forward surge current* | t = 10 ms; (50 Hz), sine | $T_{VJ}$ = 45°C | | | 850 | A |
| | | t = 8,3 ms; (60 Hz), sine | $V_R$ = 0 V | | | 920 | A |
| | | t = 10 ms; (50 Hz), sine | $T_{VJ}$ = 150°C | | | 725 | A |
| | | t = 8,3 ms; (60 Hz), sine | $V_R$ = 0 V | | | 780 | A |
| $I^2t$ | *value for fusing* | t = 10 ms; (50 Hz), sine | $T_{VJ}$ = 45°C | | | 3.62 | kA²s |
| | | t = 8,3 ms; (60 Hz), sine | $V_R$ = 0 V | | | 3.52 | kA²s |
| | | t = 10 ms; (50 Hz), sine | $T_{VJ}$ = 150°C | | | 2.63 | kA²s |
| | | t = 8,3 ms; (60 Hz), sine | $V_R$ = 0 V | | | 2.53 | kA²s |
| $C_J$ | *junction capacitance* | $V_R$ = 400 V; f = 1 MHz | $T_{VJ}$ = 25°C | | 27 | | pF |

advanced

| Symbol | Definition | Conditions | Ratings min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|
| $I_{RMS}$ | *RMS current* | per pin | | | 200 | A |
| $R_{thCH}$ | *thermal resistance case to heatsink* | | | 0.10 | | K/W |
| $T_{stg}$ | *storage temperature* | | -40 | | 125 | °C |
| **Weight** | | | | 118 | | g |
| $M_D$ | *mounting torque* | | 4.25 | | 5.75 | Nm |
| $V_{ISOL}$ | *isolation voltage* | t = 1 second | 3600 | | | V |
| | | t = 1 minute | 3000 | | | V |
| $d_S$ | *creapage distance on surface* | | 10 | | | mm |
| $d_A$ | *striking distance through air* | | 9.4 | | | mm |




| Ordering | Part Name | Marking on Product | Delivering Mode | Base Qty | Code Key |
|---|---|---|---|---|---|
| **Standard** | VUO84-16NO7 | VUO84-16NO7 | Box | 10 | 508510 |

| Similar Part | Package | Voltage class |
|---|---|---|
| VUO82-16NO7 | PWS-D | 1600 |

**Outlines PWS-D Flat**