# 3QL200AK thru 3QL200AS

## 1. 外型尺寸Feature & Dimension

### Features

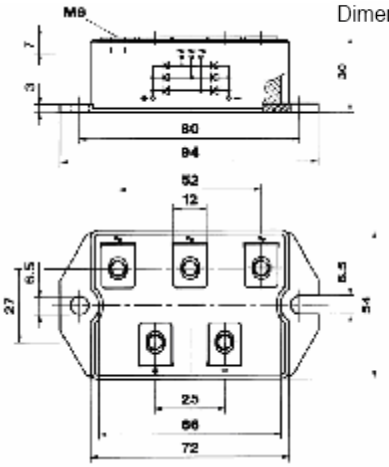
- Package with screw terminals
- Isolation voltage 3000 V~
- Glass passivated chips
- Blocking voltage up to 1600 V
- Low forward voltage drop
- UL registered E231047

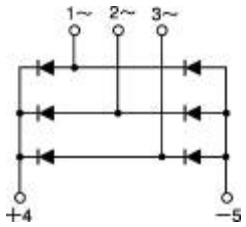
### Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

### Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling




## 2. 产品性能Product Characteristic

**ELECTRICAL AND THERMAL CHARACTERISTICS** TC=25°C unless otherwise specified

| Item | Symbol | 3QL200AK | 3QL200AO | 3QL200AQ | 3QL200AS | Unit |
|---|---|---|---|---|---|---|
| Maximum repetitive voltage | VRM | 800 | 1200 | 1400 | 1600 | V |
| Maximum RMS Voltage | VRMS | 560 | 840 | 980 | 1120 | |
| Maximum DC Blocking Voltage | VDC | 800 | 1200 | 1400 | 1600 | V |
| Peak Reverse Current (per leg) @Tj = 25°C | IR | ≤0.5 | | | | mA |
| At Rated DC Blocking Voltage @Tj = 125°C | | ≤5 | | | | mA |
| Average recified forward current 60Hz sine wave,R-load with heatsink Tc=100℃ | Io | 200 | | | | A |
| TJ=45 t=10ms (50Hz),sine ℃<br>VR=0 t=8.3ms(60Hz),sine<br>TJ=150 t=10ms (50Hz),sine ℃<br>VR=0 t=8.3ms(60Hz),sine | $I_{FSM}$ | 2000<br>2200<br>1800<br>1950 | | | | A |
| TJ=45 t=10ms (50Hz),sine ℃<br>VR=0 t=8.3ms(60Hz),sine<br>TJ=150 t=10ms (50Hz),sine ℃<br>VR=0 t=8.3ms(60Hz),sine | $I^2t$ | 20000<br>24200<br>16200<br>19010 | | | | $A^2s$ |

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| | | | |
|---|---|---|---|
| Storage temperature | Tstg | -40 to +150 | ℃ |
| 50/60Hz RMS t=1 min<br>IISOL≤1mA t=1 s | VISOL | 2500<br>3000 | V~ |
| Mounting torque(M5)<br>Terminal connection torque(M5) | Md | 5±15% | N·m |
| typical | Weight | 241 | g |
| $I_F$=300A $T_J$=125℃<br>$I_F$=300A $T_J$=25℃ | $V_F$ | 1.51<br>1.65 | V |
| For power-loss calculations only | $V_{T0}$ | 0.8 | V |
| per diode DC current<br>Per module | $R_{thJC}$ | 0.54<br>0.09 | k/w<br>k/w |
| per diode DC current(typ.)<br>per module(typ.) | $R_{thCS}$ | 0.18<br>0.03 | k/w<br>k/w |
| Creeping distance on surface | dS | 10 | mm |
| Creeping distance in air | dA | 9.4 | mm |
| Max. allowable acceleration | a | 50 | m/s2 |

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## 3. 特性曲线Characteristic Curve

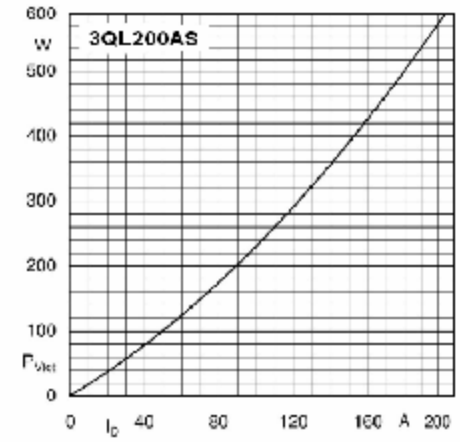
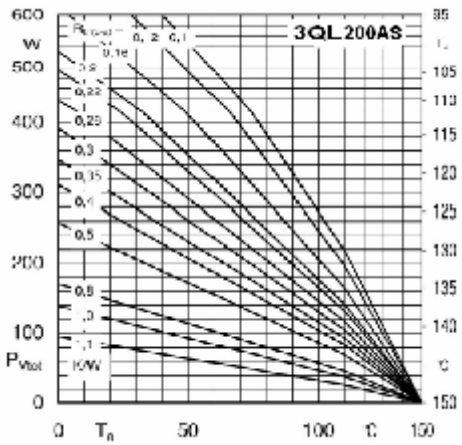



Fig.1.Power dissipation vs. output current F




ig 2 Power dissipation vs. case temperature

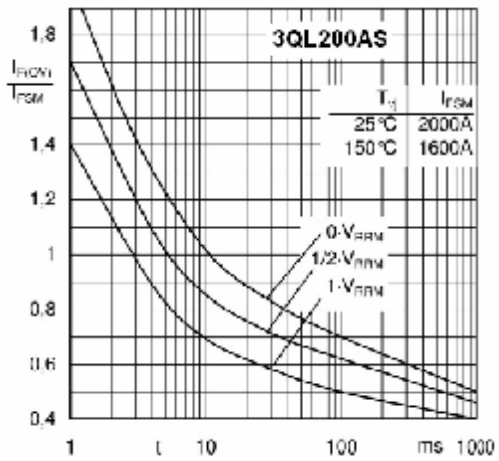



Fig.3.Surge overload characteristics vs. time

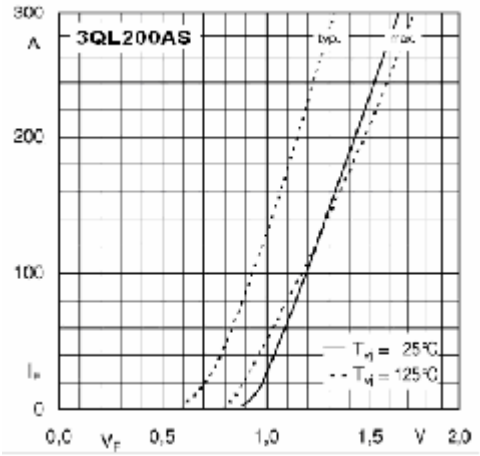



Fig.4.Forward characteristics of a diode arm

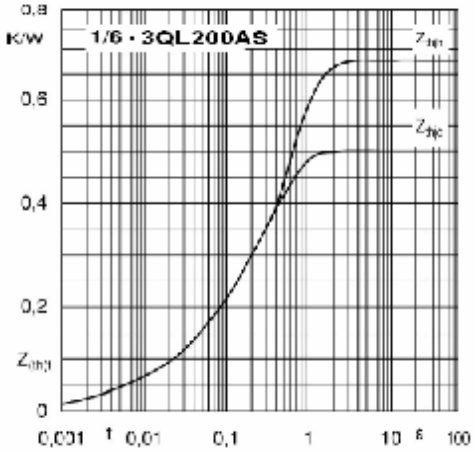



Fig.5.Transient thermal impedance vs. time

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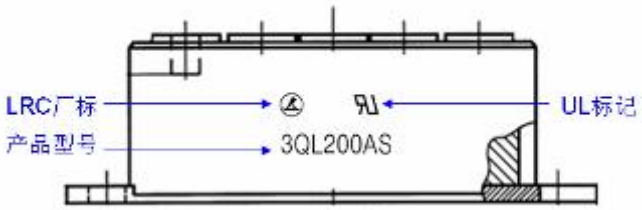
## 4. 印字规范Marking Identification




**Note：**

型号： **3** **QL** **200** **AS**

- AS: Bridge reverse voltage=1600V
- 200: Average rectified forward Current=200A
- QL: mean：QL series bridge
- 3: mean：Three phase bridge