

3QL50AK-22 Thru 3QL50AS-22

1. 外型尺寸 Feature & Dimension

Features

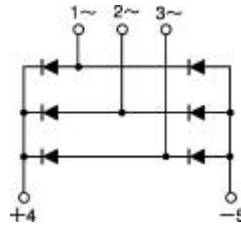
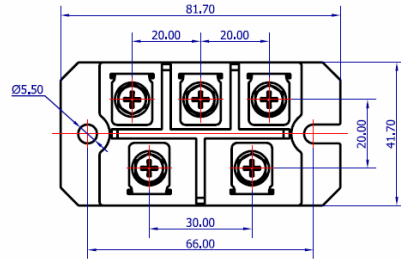
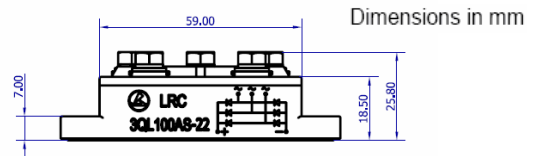
- I Package with screw terminals
- I Isolation voltage 3000 V~
- I Glass passivated chips
- I Blocking voltage up to 1600 V
- I Low forward voltage drop
- I UL registered E231047

Applications

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

Advantages

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



2. 产品性能 Product Characteristic

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

| Item | Symbol | 3QL50AK | 3QL50AO | 3QL50AQ | 3QL50AS | Unit |
|--|--------|---------|---------|---------|---------|------|
| Maximum repetitive voltage | VRM | 800 | 1200 | 1400 | 1600 | V |
| Maximum RMS Voltage | VRMS | 560 | 840 | 980 | 1120 | V |
| Maximum DC Blocking Voltage | VDC | 800 | 1200 | 1400 | 1600 | V |
| Peak Reverse Current (per leg) @Tj = 25°C | IR | ≤10 | | | | uA |
| At Rated DC Blocking Voltage @Tj = 150°C | | ≤8 | | | | mA |
| Average rectified forward current 60Hz sine wave,R-load with heatsink Tc=100°C | Io | 50 | | | | A |
| TJ=45°C VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine | IFSM | 600 | | | | A |
| TJ=150°C VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine | | 650 | | | | |
| | | 490 | | | | |
| | | 420 | | | | |

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| | | | |
|---|--------------------|-----------------------------------|------------------|
| T _J =45°C VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine T _J =150°C VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine | I ² t | 1800 2000 1270 1410 | A ² s |
| Storage temperature | T _{stg} | -40 to +150 | °C |
| 50/60Hz RMS t=1 min I _{SOL} ≤ 1mA t=1 s | V _{I SOL} | 2500 3000 | V~ |
| Mounting torque(M5) Terminal connection torque(M5) | M _d | (Recommended Value 1.5~2.5) 5±15% | N·m |
| typical | Weight | 160 | g |
| I _F =50A T _J =25°C | V _F | 1.3 | V |
| For power-loss calculations only | V _{T0} | 0.8 | V |
| per diode DC current Per module | R _{thJC} | 1.57 0.26 | k/w k/w |
| per diode DC current(typ.) per module(typ.) | R _{thCS} | 2.22 0.37 | k/w k/w |
| Creeping distance on surface | d _S | 10 | mm |
| Creeping distance in air | d _A | 9.4 | mm |
| Max. allowable acceleration | a | 50 | m/s ² |

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4. 特性曲线 Characteristic Curve

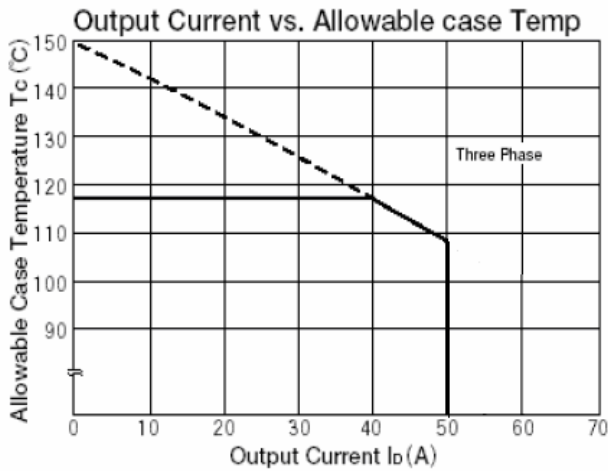


Fig.1. Output Current vs. Allowable case Temp

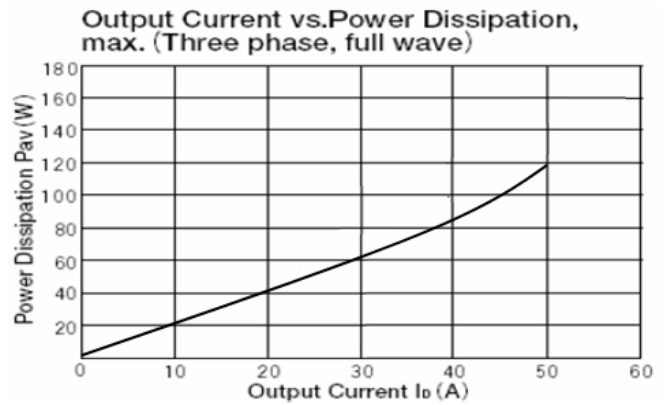


Fig.2. Output Current vs. Power Dissipation

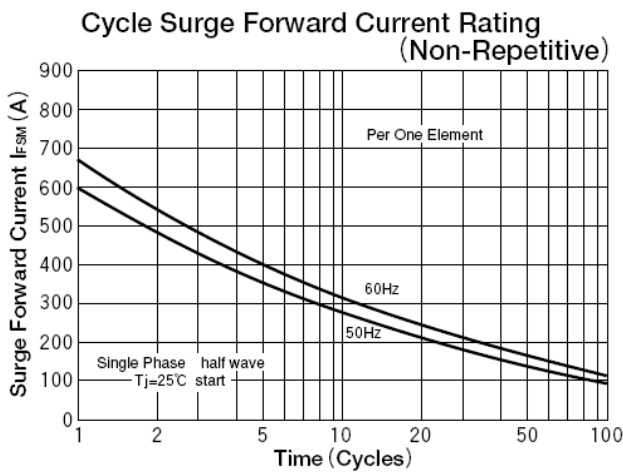


Fig.3. Surge overload characteristics vs. time

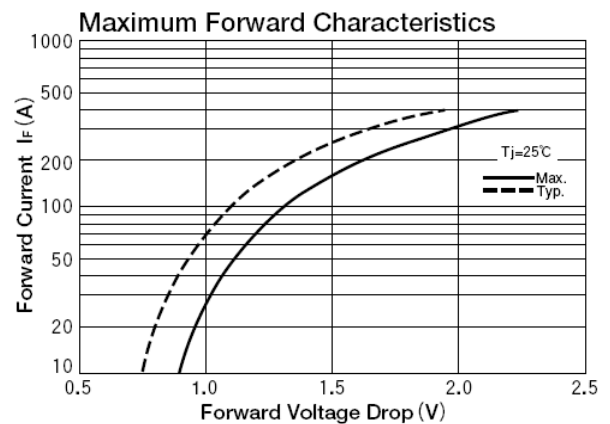


Fig.4. Forward characteristics of a diode arm

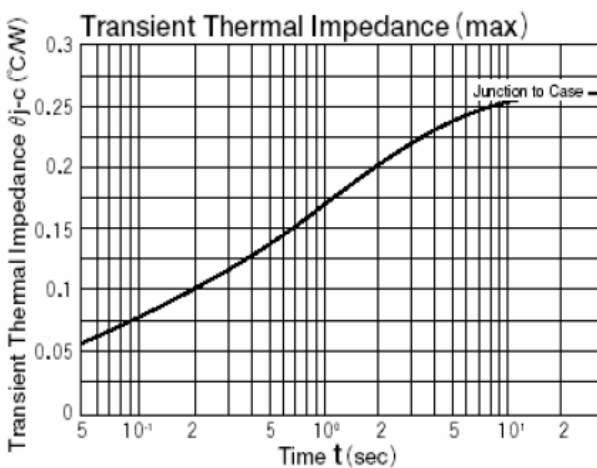
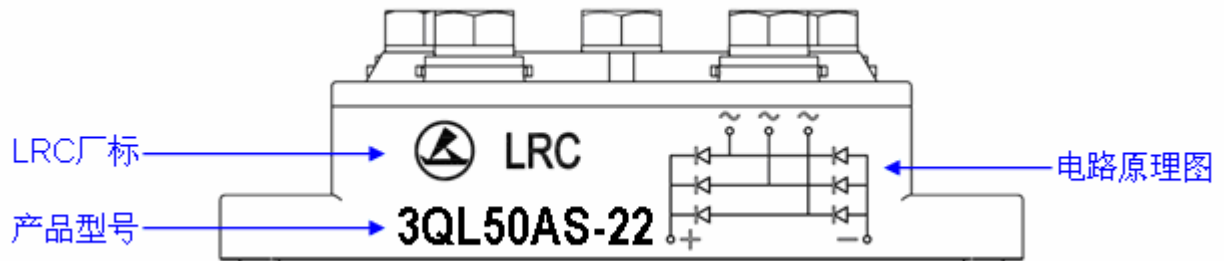


Fig.5. Transient thermal impedance vs. time

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5. 印字规范 Marking Identification



Note:

