

# 3QL50AK-30 Thru 3QL50AS-30

## 1. 外型尺寸 Feature & Dimension

### Features

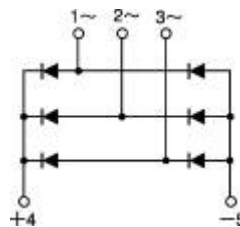
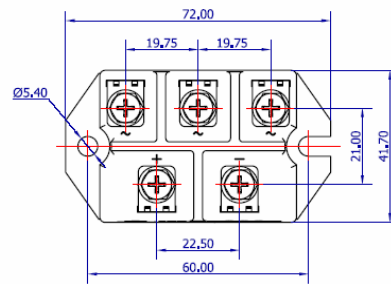
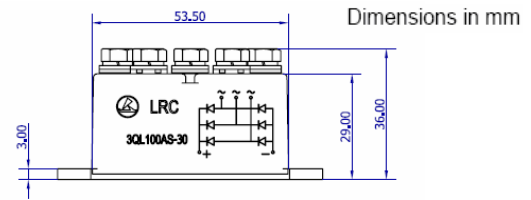
- I Package with screw terminals
- I Isolation voltage 3000 V~
- I Glass passivated chips
- I Blocking voltage up to 1600 V
- I Low forward voltage drop
- I UL registered E231047

### 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 At Rated DC Blocking Voltage @Tj = 150°C	IR	≤10				uA
		≤8				mA
Average recified 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 TJ=150°C VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine	IFSM	600				A
		650				
		490				
		420				

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

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## 4. 特性曲线 Characteristic Curve

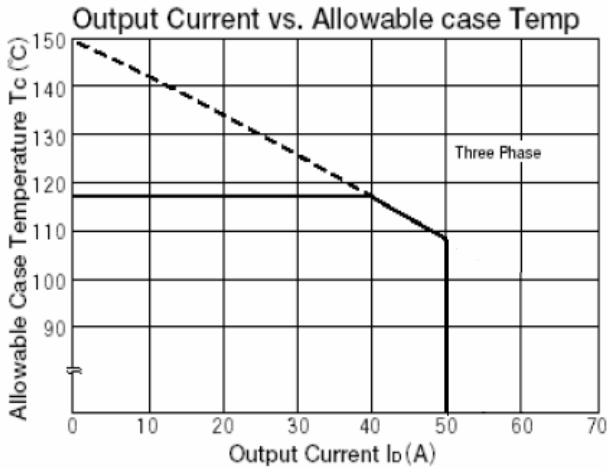


Fig.1. Output Current vs. Allowable case Temp

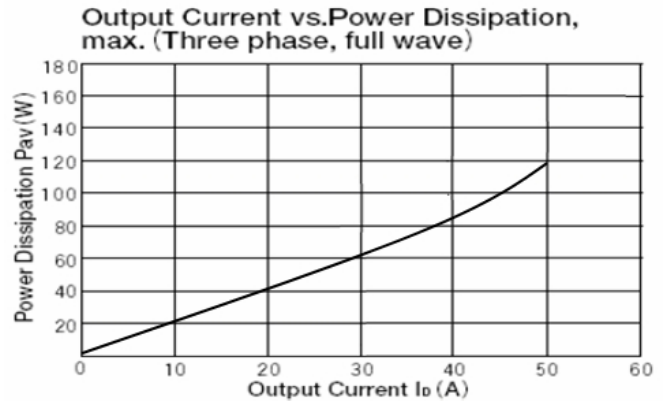


Fig.2. Output Current vs. Power Dissipation

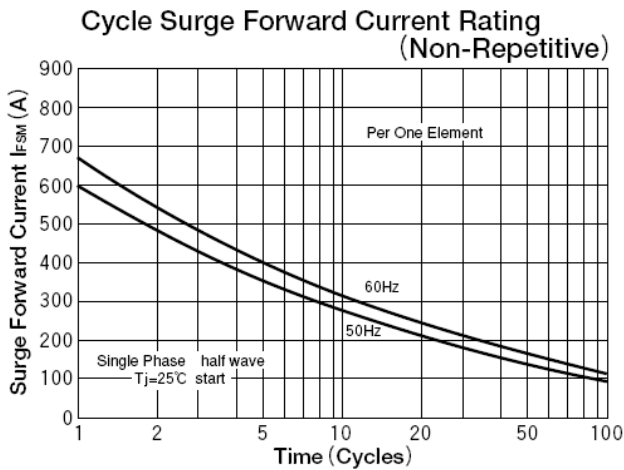


Fig.3. Surge overload characteristics vs. time

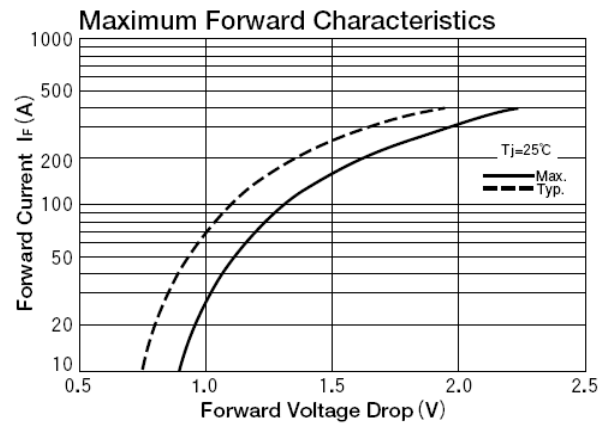


Fig.4. Forward characteristics of a diode arm

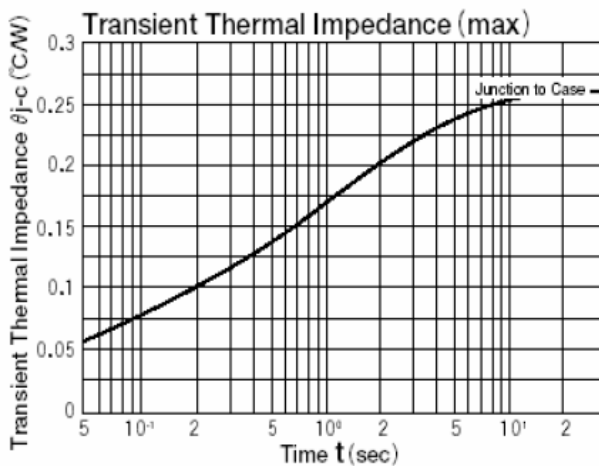
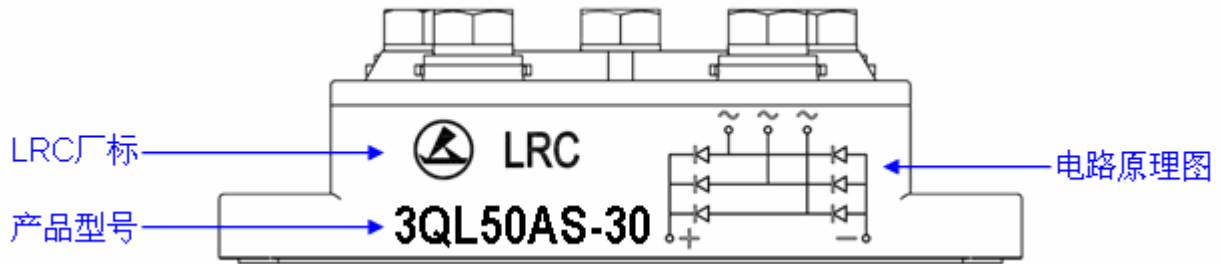


Fig.5. Transient thermal impedance vs. time

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## 5. 印字规范 Marking Identification



### Note:

