3QL60AK-22 Thru 3QL60AS-22

1. 外型尺寸Feature & Dimension

Features

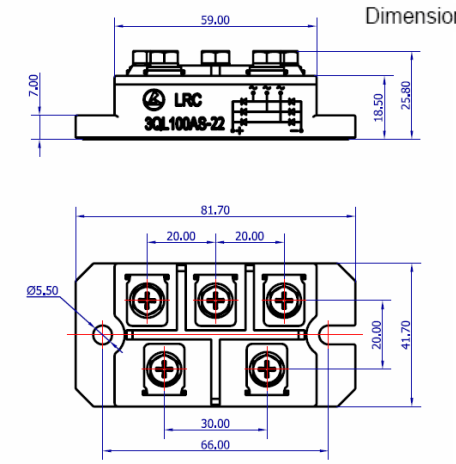
- Package with screw terminals
- Isolation voltage 3000 V~
- Glass passivated chips
- Blocking voltage up to 1600 V
- Low forward voltage drop
- UL registered E231047

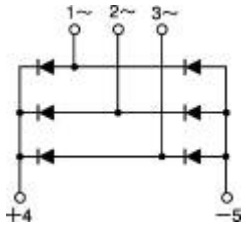
Applications

- 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	3QL60AK	3QL60AO	3QL60AQ	3QL60AS	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 recified forward current 60Hz sine wave,R-load with heatsink Tc=100℃	Io	60				A
TJ=45℃VR=0 t=10ms (50Hz),sine	I_{FSM}	700				A
t=8.3ms(60Hz),sine		750				
TJ=150℃ VR=0 t=10ms (50Hz),sine		590				
t=8.3ms(60Hz),sine		620				

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TJ=45℃VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine TJ=150℃ VR=0 t=10ms (50Hz),sine t=8.3ms(60Hz),sine	I^2t	2450 2800 1740 1920	A^2s
Storage temperature	Tstg	-40 to +150	℃
50/60Hz RMS t=1 min IISOL ≤ 1mA t=1 s	VISOL	2500 3000	V~
Mounting torque(M5) Terminal connection torque(M5)	Md	（Recommended Value 1.5~2.5）5±15%	N·m
typical	Weight	160	g
I_F=60A T_J=25℃	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	dS	10	mm
Creeping distance in air	dA	9.4	mm
Max. allowable acceleration	a	50	m/s^2

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3. 特性曲线Characteristic Curve

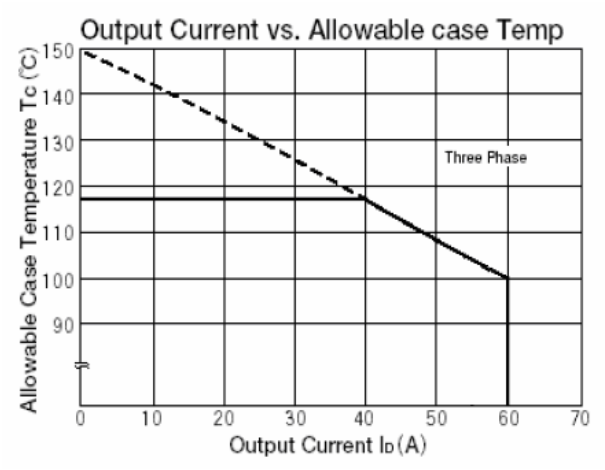


Fig.1. Output Current vs. Allowable case Temp

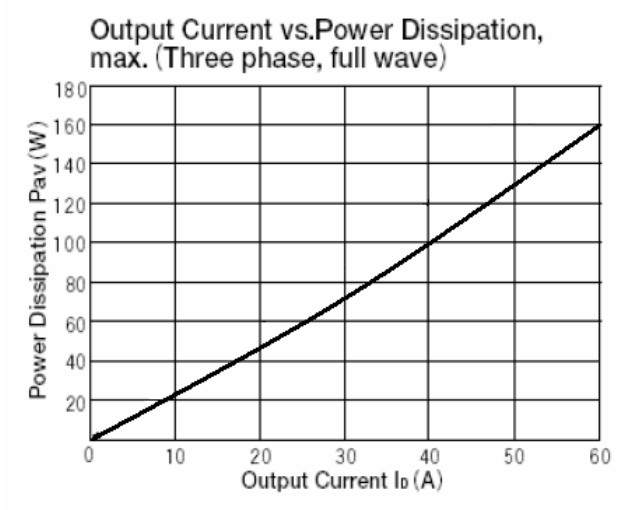


Fig.2.Output Current vs. Power Dissipation

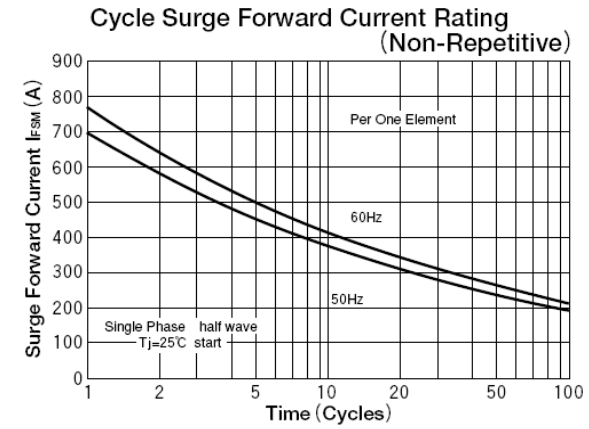


Fig.3.Surge overload characteristics vs. time

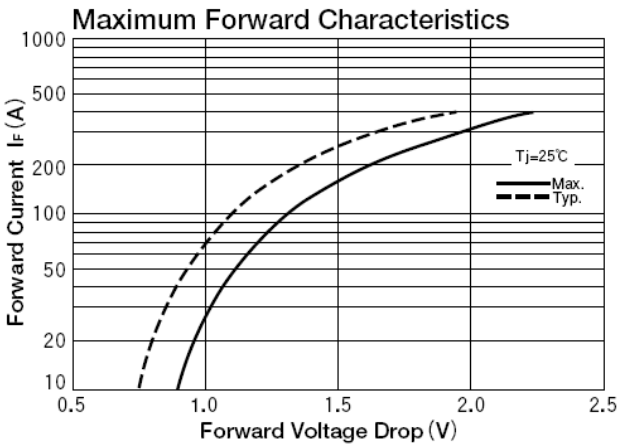


Fig.4.Forward characteristics of a diode arm

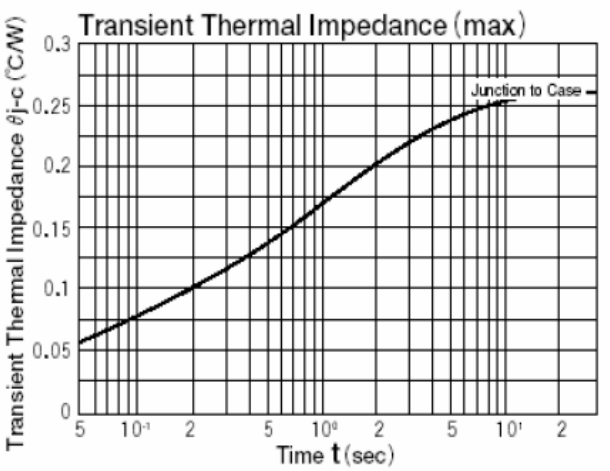
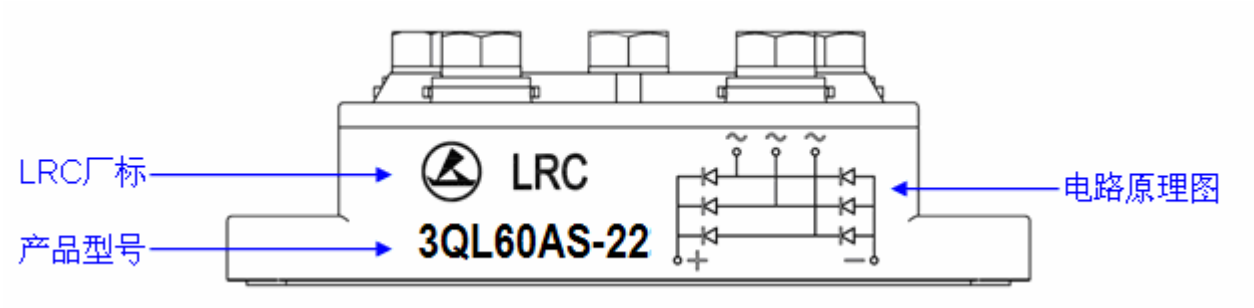


Fig.5.Transient thermal impedance vs. time

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4. 印字规范Marking Identification



Note：

型号： **3 QL 60 AS -22**

- AS → Highly size =22mm
- 60 → Bridge reverse voltage=1600V
- 60 → Average rectified forward Current=60A
- QL → mean：QL series bridge
- 3 → mean：Three phase bridge