Qualtek Electronics Corporation

# QGKF-100 Series

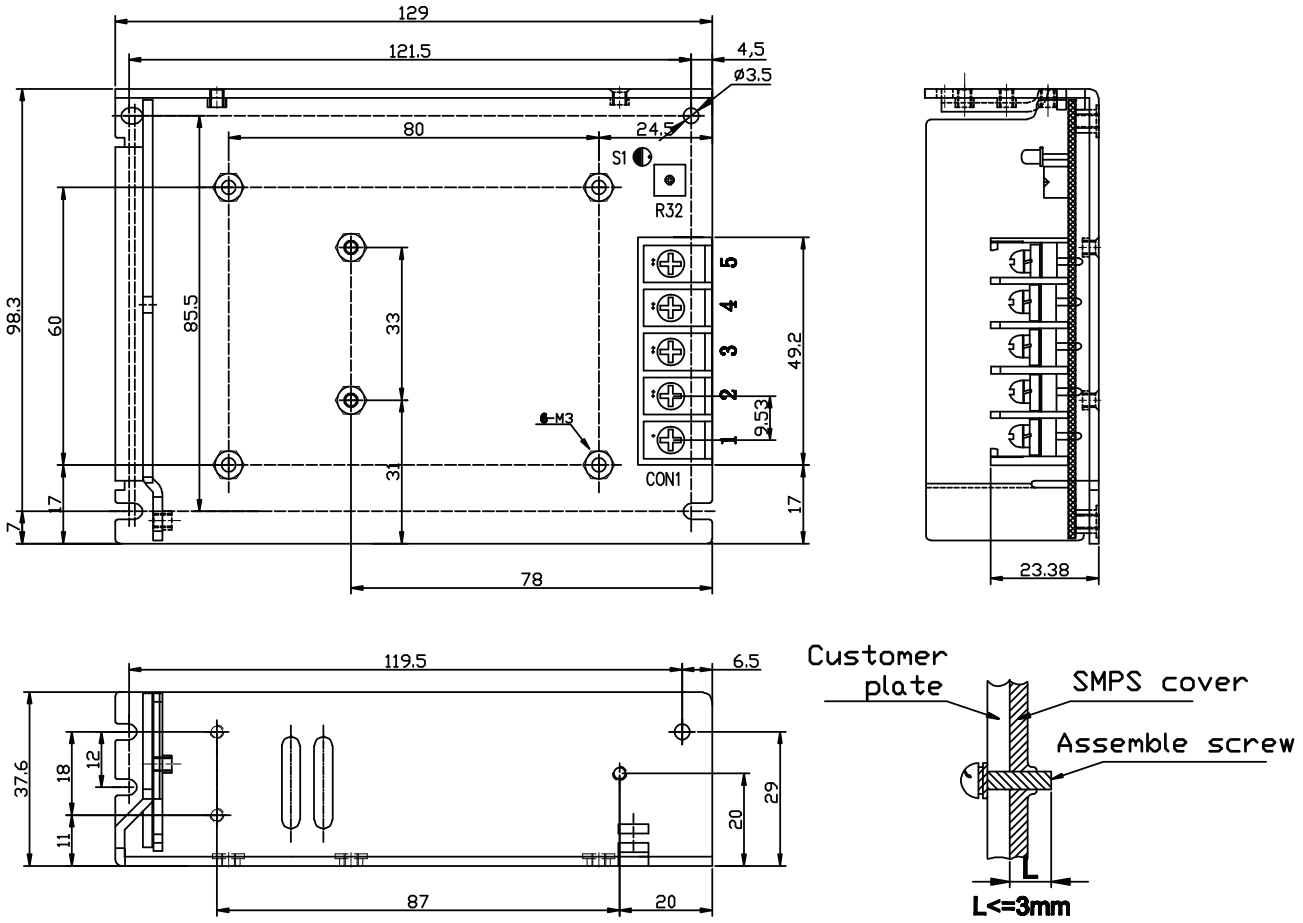
## Features:

- Universal AC input/ Full range
- Built-in active PFC function, PF>0.93
- Miniature Size, High Efficiency, and High Reliability
- Output Protections: OLP/OPP/SCP
- Withstand 300VAC Surge Input for 5 Sec
- Suitable for critical applications
- Wide operating ambient temperature (-20°C~60°C)
- PCB soldering side with conformal coating
- All using 105°C long life electrolytic capacitors.
- 100% full load burn-in test

CE CB cULus RoHS Compliant

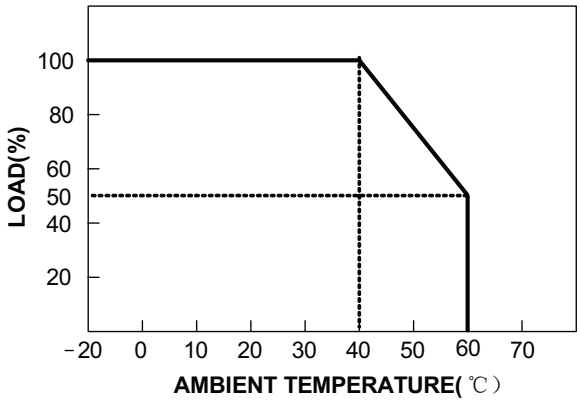
| Model | | QGKF-100-5 | QGKF-100-12 | QGKF-100-24 | QGKF-100-48 |
|---|---|---|---|---|---|
| **Output Characteristics** | | | | | |
| DC Output | | 5V | 12V | 24V | 48V |
| Rated Current | | 20A | 8.5A | 4.2A | 2.2A |
| Current Range (Note 1) | | 0~20A | 0~8.5A | 0~4.2A | 0~2.2A |
| Ripple and Noise (Note 2) | 0~60°C | ≤150mV | ≤150mV | ≤150mV | ≤150mV |
| | -20~0°C | ≤150mV | ≤150mV | ≤150mV | ≤200mV |
| Voltage ADJ. Range | | 3.3V~5.5V | 10V~15V | 21V~27V | 43.2V~52.8V |
| Voltage Accuracy | | ±2.0% | ±2.0% | ±1.0% | ±1.0% |
| Line Regulation | | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| Load Regulation | | ±2.0% | ±2.0% | ±1.0% | ±1.0% |
| Set-up Time | | ≤4.0s (115VAC input, full load) ≤2.0s (230VAC input, full load) | | | |
| Hold-up Time | | ≥12ms (230VAC input, full load) | | | |
| Temperature Coefficient | | ±0.03%/°C | | | |
| Overshoot and Undershoot | | <5.0% | | | |
| **Input Characteristics** | | | | | |
| Voltage Range | | 90VAC~264VAC | | | |
| Frequency Range | | 47Hz-63Hz | | | |
| Power Factor (Typical) | | PF>0.98/115VAC PF>0.93/230VAC | | | |
| Efficiency (Typical) 230VAC Input | | 84% | 87% | 88% | 88% |
| AC Current (max) | | <1.5A | | | |
| Inrush Current (Typical) | | <30A@115VAC Cold start <50A@230VAC Cold start | | | |
| Leakage Current | | Input-Output: <0.25mA Input-PG: <3.5mA | | | |
| **Protection** | | | | | |
| Over Load (OLP) | | 110%~150% of rated output current, hiccup mode, auto recovery | | | |
| Over Power (OPP) | | 110%~150% of rated output power, hiccup mode, auto recovery | | | |
| Short Circuit (SCP) | | Long-term mode, auto recovery | | | |
| **Environmental Characteristics** | | | | | |
| Operating Amb. Temp. & Hum | | -20°C~60°C; 20%~90% RH Non-Condensing | | | |
| Storage Temp. & Hum | | -30°C~85°C: 10%-95% RH Non-Condensing | | | |
| Safety Standards | | UL60950-1 2nd Ed; IEC 60950-1:2005(2nd Ed); EN60950-1: 2006 | | | |
| Withstand Voltage | | Primary-Secondary: 3.0KVAC;≤10mA. Primary-PG: 1.5KVAC;≤10mA. Secondary-PG: 0.5KVDC;≤10mA | | | |
| Isolation Resistance | | 100M ohms | | | |
| EMI Conduction & Radiation | | Compliance to EN55022 Class B | | | |
| Harmonic Current | | Compliance to EN61000-3-2, Class A | | | |
| EMS Immunity | | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; heavy industry level | | | |
| **General Characteristics** | | | | | |
| MTBF (MIL-HDBK-217F) | | More than 200,000Hrs (25°C, Full load) | | | |
| Dimension (LxWxH) | | 129x98.3x37.6mm | | | |
| Packing | | 30PCS/CTN. G.W: 14.6kgs | | | |
| Cooling Method | | Cooling by free air convection | | | |
| Note | | 1. All parameters NOT specially mentioned are measured at rated input, rated load, and 25°C of ambient temperature<br>2. Measured at 20MHz of bandwith by using a 12" Twisted pair wire terminated with a 0.1uF & 47uF parallel capacitor<br>3. The SPS is considered a component which will be installed into final equipment. The equipment must be re-confirmed that it still meets EMC directives. | | | |

# MECHANICAL SPECIFICATIONS




| Pin No. | Assignment |
|---|---|
| 1 | AC-L |
| 2 | AC-N |
| 3 | F.G |
| 4 | DC output -V |
| 5 | DC output +V |

# DERATING CURVE




UNIT: mm