

QA01-17

Application Design For IGBT Driver DC-DC Converter

QA01-17 is an application-designed power supply for the IGBT driver which needs two outputs isolated from the input. With two outputs, it can be better to drive IGBT effectively. The module also provides functions of short-circuit protection and auto-recovery capability.



FEATURES

- Input: 14.5 ~15.5VDC
- Output: 17V, 80mA
- Efficiency up to 80%
- Small footprint
- SIP package
- Output short circuit protection
- 3000VAC isolation
- Operation temperature: -40°C ~ +85°C
- No preload requirement
- RoHS compliance

APPLICATION

- General-purpose Inverter
- AC Servo Systems
- Uninterruptable Power Supplies(UPS)
- Welding Machines

RECOMMENDED TO SUPPLY THE FOLLOWING IGBT DRIVERS

- QC962
- M57962 Series

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Absolute Maximum Ratings

Item	Test Conditions	Limit	Units
Supply Voltage	V_{IN} DC	16	V
Output Current	Io1 VIN=15VDC, PIN6&PIN7	80	mA
	Io2 VIN=15VDC, PIN5&PIN6	40	mA
Isolation Voltage (input/output)	V_{iso} Sine wave voltage 50Hz/60 Hz, 1mA max, 1 min.	3000	V
Operation Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-50 ~ +125	°C

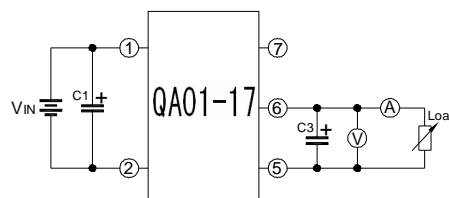
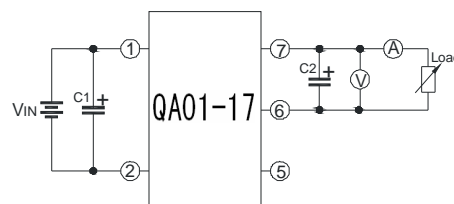
Notes: 1. $T_a=25^\circ\text{C}$, unless otherwise specified;
2. Other input modules are also available in our company.

Electrical Characteristic

Item	Test Conditions	Limit			Units
		Min.	Typ.	Max.	
Supply Voltage	V_{IN} Recommended Range	14.5	15.0	15.5	V
Output Voltage	Vo1 VIN=15VDC PIN6&PIN7 Io1=80mA	16.5	17	18	V
	Vo2 VIN=15VDC PIN5&PIN6 Io2=40mA	7	TBD	10	V
Line Regulation	V_{IN} change of 1%		1.2	1.5	%
Efficiency	η PIN6&PIN7 Io1=80mA	77	80		%
Isolation Capacitor (input/output)	C 1KHz, 1V		8	10	pF
Ripple & Noise*	V_{p-p} PIN6&PIN7 Io1=80mA		50	150	mV

Notes: $T_a=25^\circ\text{C}$; $V_o=15\text{V}$, unless otherwise specified.

Testing Circuit



C1, C2, C3: 100 μF /35V (Low impedance)

