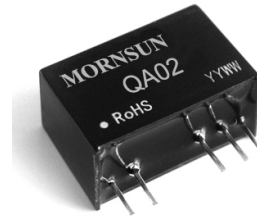


QA02

Specially Designed For IGBT Driver DC-DC Converter

QA02 is specially designed for the IGBT driver which needs two isolation power supply. With two independent outputs, it can be better to supply power to the ON/OFF driver. The module also provides functions of short circuit protection and self-recovery capability.



RoHS

FEATURES

- Input: 11.6 ~12.4VDC
- Output: 15V, 80mA
- Efficiency up to 80%
- Small footprint
- SIP package
- Good temperature identity
- Output short circuit protection
- 3000VAC isolation
- Operation temperature: -40°C ~ +85°C
- No external component required
- Could be operated under no load
- 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

MORNSUN Science & Technology Co.,Ltd.

Address: No. 5, Kehui St. 1, Kehui development center, Science Ave., Guangzhou Science City, Luogang district, Guangzhou, P.R. China.

Tel: 86-20-28203030

Fax: 86-20-38601272

[Http://www.mornsun-power.com](http://www.mornsun-power.com)

Absolute Maximum Ratings

Item	Test Conditions	Limit	Units
Supply Voltage	Vin DC	13	V
Output Current	Io1 Vin=12VDC, PIN6&PIN7	80	mA
	Io2 Vin=12VDC, PIN5&PIN6	40	mA
Isolation Voltage (input/output)	Viso Sine wave voltage 50Hz/60Hz, 1mA max, 1 minute	3000	Vrms
Operation Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-50 ~ +125	°C

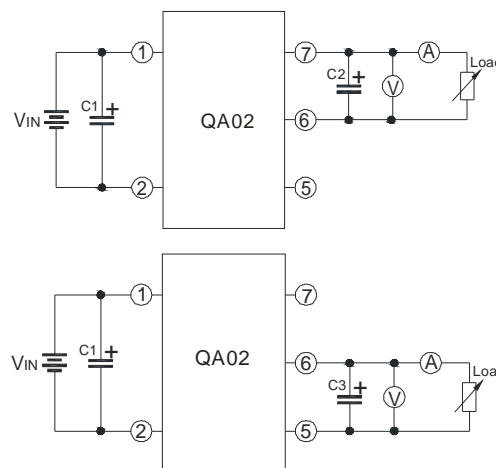
Notes: 1. Ta=25°C, unless otherwise specified;
2. Other input modules are also available in our company.

Electrical Characteristic

Item	Test Conditions	Limit			Units
		Min.	Typ.	Max.	
Supply Voltage	Vin Recommended Range	11.6	12.0	12.4	V
Output Voltage	Vo1 Vin=12VDC PIN6&PIN7 Io1=80mA	14	15	16	V
	Vo2 Vin=12VDC PIN5&PIN6 Io2=40mA	7	8.7	10	V
Line Regulation	Vin change of 1%		1.2	1.5	%
Efficiency	η PIN6&PIN7 Io1=80mA	77	80		%
Isolation Capacitor (input/output)	C 1kHz, 1V		6.6		pF
Ripple & Noise*	Vp-p PIN6&PIN7 Io1=80mA		100	200	mV

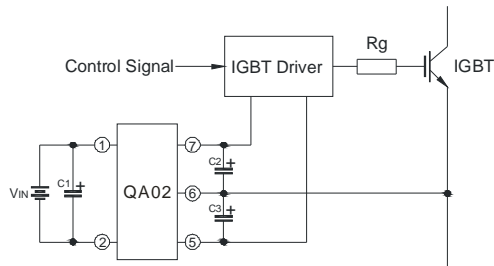
Notes: Ta=25°C; V_D=12V, unless otherwise specified.

Testing Circuit



C1, C2, C3: 100μF/35V (Low impedance)

Application Circuit



Vin: 12VDC

C1: 100 μ F/35V(Low impedance)

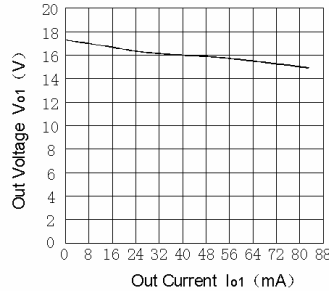
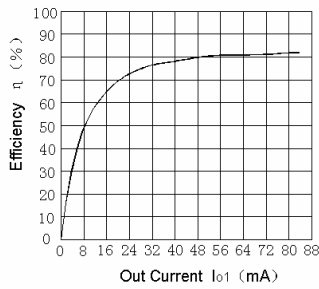
C2: 100 μ F/35V(Low impedance)

C3: 100 μ F/35V(Low impedance)

Application Notes

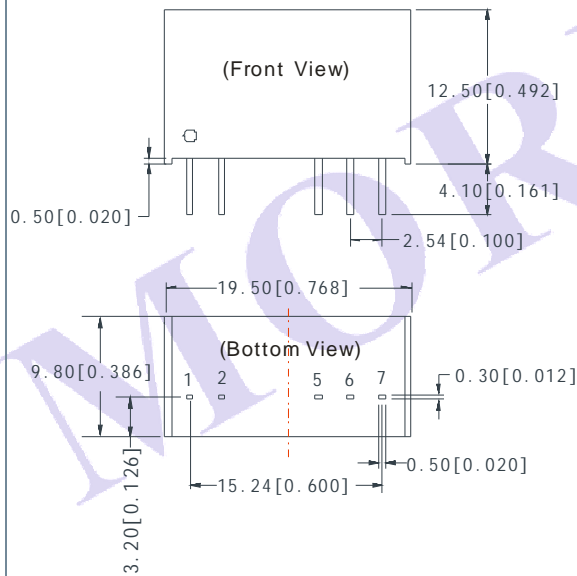
1. The wire between the converter and IGBT driver must as short as possible;
2. External filter capacitors should be connected as close as possible to the converter and the IGBT driver;
3. To ensure the high peak gate current, the filter capacitors should be low impedance.
4. The output average power of the IGBT driver should be less than the output power of DC-DC module.
5. In order to avoid over temperature damage for long time short-circuit, the recommended short-circuit time is less than ten minutes at 25°C.

Efficiency and Out Voltage to Out Current Characteristics



Outline Dimensions

MECHANICAL DIMENSIONS



FOOTPRINT DETAILS

Pin	Function
1	Vin
2	GND
5	-Vo
6	0V
7	+Vo

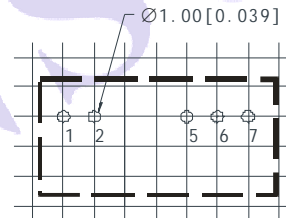
Note:

Unit:mm[inch]

Pin section tolerances:±0.10mm[±0.004inch]

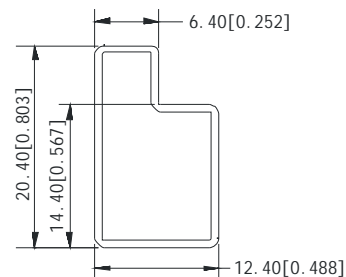
General tolerances:±0.25mm[±0.010inch]

RECOMMENDED FOOTPRINT



Note: grid 2.54*2.54mm.

TUBE OUTLINE DIMENSIONS



Note:

Unit :mm[inch]

General tolerances: ±0.50mm[±0.020inch]

L=530mm[20.866inch] Devices per tube: 25pcs

L=220mm[8.661inch] Devices per tube: 10pcs

Short tube inner packaging dimensions: 255*170*80mm

Short tube outer packaging dimensions

(with six inner packaging box): 375*280*270mm

Long tube inner packaging dimensions: 580*200*100mm

Long tube outer packaging dimensions

(with two inner packaging box): 600*215*220mm

Long tube outer packaging dimensions

(with three inner packaging box): 600*215*325mm