FEATURES：

- High efficiency up to 80%
- Ultra-Compact SIP package
- Excellent thermal characteristic
- I/O isolation test voltage 3000VAC
- Ultra-low isolation capacitance
- Operating ambient temperaturerange: -40℃to+105℃
- No load operation is available
- DC/DC Converter for IGBT driver

Selection Guide

Part No.	INPUT			OUTPUT		Full Load Efficiency （%/Typ）	CapacitiveLoad(μF)
	Norminal （Vdc）	Range （Vdc）	Current(mA, Typ.) Full Load/No Load	Voltage (VDC) +Vo1/+Vo2	Current (mA) +Io1/+Io2		
QA01	15	14.5-15.5	130/20	+15/-8.7	+80/-40	77/80	220
QA01-09	15	14.5-15.5	84/20	+9.0/--	+111/--	77/80	220
QA01-A09	15	14.5-15.5	84/20	+9.0/-9.0	+55/-55	77/80	220
QA01-17	15	14.5-15.5	143/20	+17/-8.7	+80/-40	77/80	220
QA02	12	10.8-13.2	162/20	+15/-8.7	+80/-40	77/80	220
QA03	24	23.3-24.7	81/20	+15/-8.7	+80/-40	77/80	220
QA04	12	9-15	223/20	+15/-8.0	+100/-80	77/80	220

customized accepted ,pls contact sales for details

Input Specifications

Item		Operating Conditions	Min.	Typ.	Max.
Input Voltage (1sec. max.)	QA01	DC	-0.7VDC	-	16VDC
	QA02	DC	-0.7VDC	-	13VDC
	QA03	DC	-0.7VDC	-	26VDC
	QA04	DC	-0.7VDC	-	15VDC
Input Filter			Capacitance Filter		
Hot Plug			Unavailable		

Output Specifications

Item			Operating Conditions	Min.	Typ.	Max.
Output voltage	QA01	+Vo	Vin=15VDC, Pin6 & Pin7 +Io=+80mA	14.25VDC	15VDC	15.75VDC
		-Vo	Vin=15VDC, Pin5 & Pin6 -Io=-40mA	-8VDC	-8.7VDC	-9.4VDC
	QA01-09	+Vo	Vin=15VDC, Pin6 & Pin7 +Io=+111mA	8.46VDC	9VDC	9.54VDC
		-Vo	-	-	-	-
	QA01-A09	+Vo	Vin=15VDC, Pin6 & Pin7 +Io=+55mA	8.55VDC	9VDC	9.45VDC
		-Vo	Vin=15VDC, Pin5 & Pin6	-8.28VDC	-9VDC	-9.72VDC

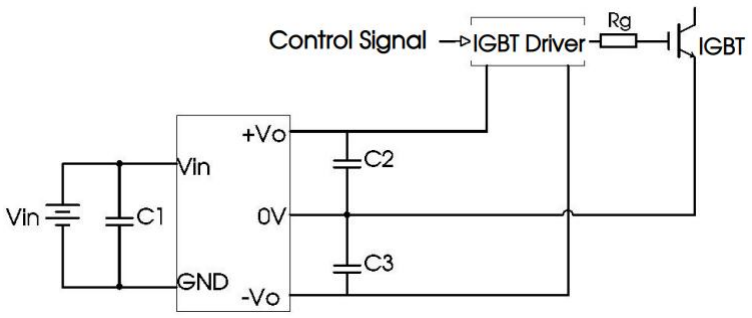
			-Io=-55mA			
	QA01-17	+Vo	Vin=15VDC, Pin6 & Pin7 +Io=+80mA	16.15VDC	17VDC	17.85VDC
		-Vo	Vin=15VDC, Pin5 & Pin6 -Io=-40mA	-8VDC	-8.7VDC	-9.4VDC
	QA02	+Vo	Vin=12VDC, Pin6 & Pin7 +Io=+80mA	14.25VDC	15VDC	15.75VDC
		-Vo	Vin=12VDC, Pin5 & Pin6 -Io=-40mA	-8VDC	-8.7VDC	-9.4VDC
	QA03	+Vo	Vin=24VDC, Pin6 & Pin7 +Io=+80mA	14.25VDC	15VDC	15.75VDC
		-Vo	Vin=24VDC, Pin5 & Pin6 -Io=-40mA	-8VDC	-8.7VDC	-9.4VDC
	QA04	+Vo	Vin=12VDC, Pin6 & Pin7 +Io=+100mA	14.25VDC	15VDC	15.75VDC
		-Vo	Vin=12VDC, Pin5 & Pin6 -Io=-80mA	-7.36VDC	-8VDC	-8.64VDC
Voltage Accuracy			QA01-09	-	±4%	±6%
Linear Regulation			Input voltage range	-	±1.2%	±1.5%
Load Regulation	10%-100% load		QA01-09	-	12%	26%
		Other models	Positive output	-	8%	15%
			Negative output	-	10%	15%
Temperature Coefficient			Full load	-	-	±0.03 %/℃
Ripple & Noise			20MHz bandwidth	-	100mVp-p	200mVp-p
Short-circuit Protection				Continuous, self-recovery		

Gerneral Specifications

Item	Operating Conditions	Min.	Typ.	Max.
Isolation Voltage	Input-output Electric strength test for 1 minute with a leakage current of 1mA max	3000Vac	-	-
Insulation Resistance	Input- output resistance at 500VDC	1000MΩ	-	-
Isolation capacitor	Input- output capacitor at 100kHz/0.1V	-	6.6pF	-
Operating Temperature		-40℃	-	105℃
Storage Temperature		-55℃	-	125℃
Pin Soldering Resistance Temperature	Soldering spot is 1.5mm away from case for 10 seconds	-	-	300℃
Case Temperature Rise	Ta=25℃, nominal input voltage, full load	-	-	25℃
Storage Humidity	Non-condensing	-	-	95%RH
Switching Frequency	Full load, nominal input voltage	-	100Khz	300Khz
MTBF	MIL-HDBK-217F@25℃	3500 k hours	-	-

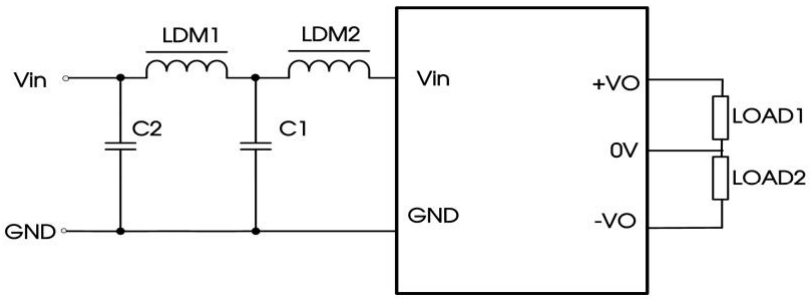
Cooling Method	Free air convection
Case Material	Black plastic; flame-retardant and heat-resistant
Weight	4.3 g (Typ.)

Recommended Circuit



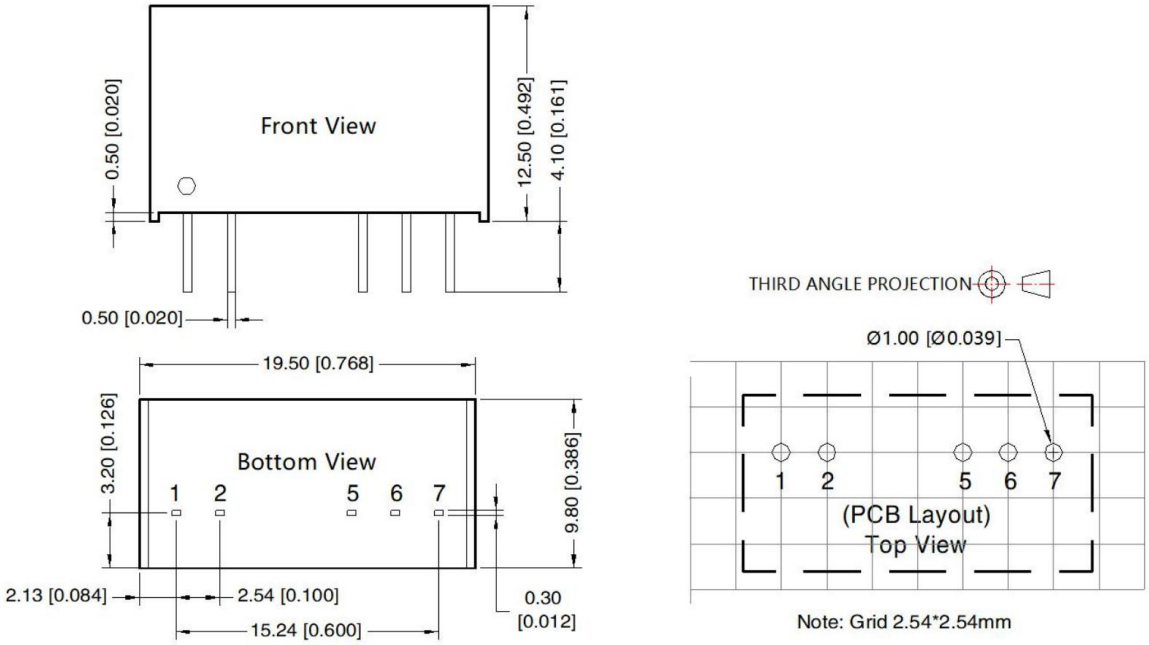
C1/ C2 /C3
100uF/35V (Low internal resistance capacitance)

EMC Circuit



Input Voltage		12/15/24VDC
EMI	C1、C2	4.7μF /50V
	LDM1	12μH
	LDM2	47μH

Dimensions and Recommended Layout



Note:
Unit: mm[inch]
Pin section tolerances: ±0.10[±0.004]
General tolerances: ±0.50 [0.020]

Pins

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

Noted

1. Input current: Ensure that the output current of the power supply meets the instantaneous starting current of the power module (that is, twice the average input current of the power module).
2. Output load requirements: Avoid no-load use. When the actual power consumption of the load is less than 10% of the rated output power of the module or no load occurs, connect an external resistance to the output end (the sum of the external resistance and the load power is greater than or equal to 10% of the rated load) or select a module with a smaller rated power.
3. The external capacitance of the output end should not be too large; otherwise, the module may be overcurrent or poorly started. For details, see the external capacitance recommendation table.
4. External LC filter circuit can be connected for occasions with high ripple noise requirements.