FEATURES：

- Reinforced insulation
- I/O isolation test voltage: 5.0kVAC
- Partial Discharge 1700V
- Characterised CMTI>200kV/μs
- Max. Capacitive Load: 2200μF
- Ultra-low isolation capacitance: 3.5pF(typ.)
- High efficiency up to 87%
- Industry standard pin-out
- SIP package
- Operating ambient temperaturerange: -40℃to+105℃
- Continuous short-circuit protection
- DC/DC converter for Sic 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		
QA053C-1505R3	5	4.5-5.5	343/20	+15/-5	+80/-40	78/82	1000
QA053C-2004R3	5	4.5-5.5	407/18	+20/-4	+80/-40	78/82	470
QA053C-1803R3	5	4.5-5.5	415/20	+18/-3.5	+80/-80	78/82	680
QA123C-1502R3	12	10.8-13.2	167/8	+15/-2.5	+100/-100	82/87	2200
QA123C-1803R3	12	10.8-13.2	200/8	+18/-3	+100/-100	82/87	1000
QA123C-1504R3	12	10.8-13.2	215/8	+15/-4	+120/-120	82/87	2200
QA153C-1504R3	15	13.5-16.5	171/8	+15/-4	+120/-120	82/87	2200
QA243C-1504R3	24	21.6-26.4	131/10	+15/-4	+120/-120	77/82	2200
QA123C-2005R3	12	10.8-13.2	213/14	+20/-5	+90/-90	82/87	470
QA153C-2005R3	15	13.5-16.5	167/8	+20/-5	+90/-90	82/87	2200
QA243C-2005R3	24	21.6-26.4	129/11	+20/-5	+90/-90	76/81	2200

customized accepted ,pls contact sales for details

Input Specifications

Item		Operating Conditions	Min.	Typ.	Max.
Input Voltage (1sec. max.)	Vin=5VDC	DC	-0.7VDC	-	9VDC
	Vin=12VDC	DC	-0.7VDC	-	18VDC
	Vin=15VDC	DC	-0.7VDC	-	21VDC
	Vin=24VDC	DC	-0.7VDC	-	30VDC
Input Filter			Capacitance Filter		
Hot Plug			Unavailable		

Output Specifications

Item			Operating Conditions	Min.	Typ.	Max.
Output voltage	QA053C-1505R3	+Vo	Vin=5VDC，Pin6 & Pin7 +Io= +80mA	14.55VDC	15.3VDC	16.05VDC
		-Vo	Vin=5VDC，Pin5 & Pin6 -Io= -40mA	-4.45VDC	-4.7VDC	-4.95VDC

	QA053C-2004R3	+Vo	Vin=5VDC，Pin6 & Pin7 +Io= +80mA	18.8VDC	19.8VDC	20.8VDC
		-Vo	Vin=5VDC，Pin5 & Pin6 -Io= -40mA	-3.8VDC	-4VDC	-4.2VDC
	QA053C-1803R3	+Vo	Vin=5VDC，Pin6 & Pin7 +Io= +80mA	16.74VDC	17.64VDC	18.54VDC
		-Vo	Vin=5VDC，Pin5 & Pin6 -Io= -80mA	-3.13VDC	-3.3VDC	-3.67VDC
	QA123C-1502R3	+Vo	Vin=12VDC， Pin6 & Pin7 +Io= +100mA	13.86VDC	14.61VDC	15.36VDC
		-Vo	Vin=12VDC， Pin5 & Pin6 -Io= -100mA	-2.28VDC	-2.4VDC	-2.53VDC
	QA123C-1803R3	+Vo	Vin=12VDC， Pin6 & Pin7 +Io= +100mA	17.1VDC	18VDC	18.9VDC
		-Vo	Vin=12VDC， Pin5 & Pin6 -Io= -100mA	-3VDC	-3.15VDC	-3.3VDC
	QA123C-1504R3	+Vo	Vin=12VDC， Pin6 & Pin7 +Io= +120mA	14.25VDC	15VDC	15.75VDC
		-Vo	Vin=12VDC， Pin5 & Pin6 -Io= -120mA	-3.6VDC	-3.8VDC	-4VDC
	QA123C-2005R3	+Vo	Vin=12VDC， Pin6 & Pin7 +Io= +90mA	18.5VDC	19.5VDC	20.5VDC
		-Vo	Vin=12VDC，Pin5 & Pin6 -Io= -90mA	-4.95VDC	-5.2VDC	-5.45VDC
	QA153C-1504R3	+Vo	Vin=15VDC， Pin6 & Pin7 +Io= +120mA	13.76VDC	14.51VDC	15.26VDC
		-Vo	Vin=15VDC， Pin5 & Pin6 -Io= -120mA	-3.8VDC	-4VDC	-4.2VDC
	QA153C-2005R3	+Vo	Vin=15VDC， Pin6 & Pin7 +Io= +90mA	18.5VDC	19.5VDC	20.5VDC
		-Vo	Vin=15VDC，Pin5 & Pin6 -Io= -90mA	-4.95VDC	-5.2VDC	-5.45VDC
	QA243C-1504R3	+Vo	Vin=24VDC， Pin6 & Pin7 +Io= +120mA	14.55VDC	15.3VDC	16.05VDC
		-Vo	Vin=24VDC， Pin5 & Pin6 -Io= -120mA	-3.96VDC	-4.16VDC	-4.36VDC
	QA243C-2005R3	+Vo	Vin=24VDC， Pin6 & Pin7 +Io= +90mA	19VDC	20VDC	21VDC
		-Vo	Vin=24VDC，Pin5 & Pin6 -Io= -90mA	-4.75VDC	-5VDC	-5.25VDC
Voltage Accuracy			10% - 100% load			
Linear Regulation	5Vin	Full voltage input range	+Vo Output	-	±1.1%	±1.4%
			-Vo Output	-	±1.1%	±1.4%
	Other input		+Vo Output	-	±1.1%	±1.5%
			-Vo Output	-	±1.1%	±1.5%
	5V Input model		+Vo Output	-	8%	15%
			-Vo Output	-	10%	15%
	QA123C-1502R3		+Vo Output	-	8%	17%

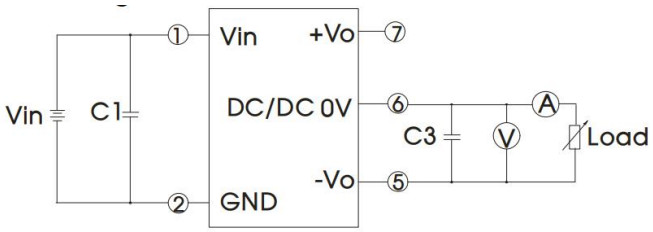
Load Regulation		10% - 100% load	-Vo Output	-	13%	17%
	QA053C-1803R3G QA123C-1803R3G		+Vo Output	-	10%	17%
			-Vo Output	-	12%	17%
	QA123C-1504R3G QA153C-1504R3G		+Vo Output	-	14%	20%
			-Vo Output	-	16%	20%
	Other model		+Vo Output	-	6%	15%
			-Vo Output	-	8%	15%
Temperature Coefficient		Full load		-	±0.04 %/℃	±0.1 %/℃
Ripple & Noise	5Vin	20MHz bandwidth		-	50mVp-p	150mVp-p
	Other			-	50mVp-p	150mVp-p
Short-circuit Protection				Continuous, self-recovery		

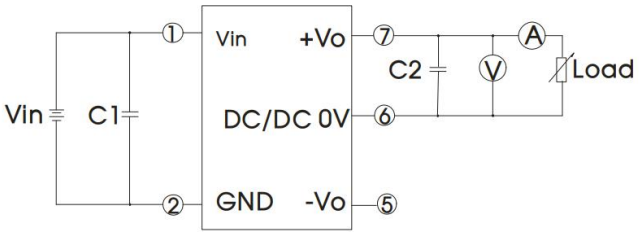
Gerneral Specifications

Item	Operating Conditions	Min.	Typ.	Max.
Isolation	Input-output, Test for 1 minute with a leakage current of 1mA max(reinforced insulation)	5000Vac	-	-
Continuous insulation voltage（IEC61800-5-1）	Input- output	1700V	-	-
Insulation Resistance	Input- output resistance at 500VDC	1000MΩ	-	-
Isolation capacitor	Input- output capacitor at 100kHz/0.1V	-	3.5pF	5pF
Electrical clearance	Input- output	14.14mm	14.74mm	-
Creepage distance	Input- output	14.14mm	14.74mm	-
CMTI	Input- output	±200kV/us	-	-
Operating Temperature	Derating when operating temperature≥85℃,	-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	-	-	40℃
Storage Humidity	Non-condensing	5%RH	-	95%RH
Switching Frequency	Full load, nominal input voltage	-	200Khz	-
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.)			

Design Reference

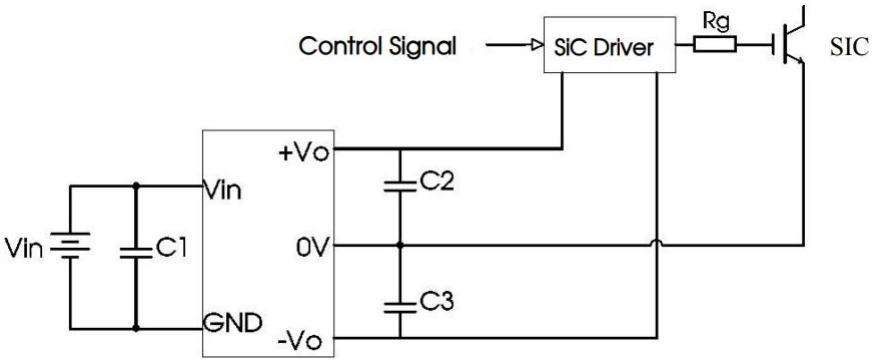
1.Test configurations





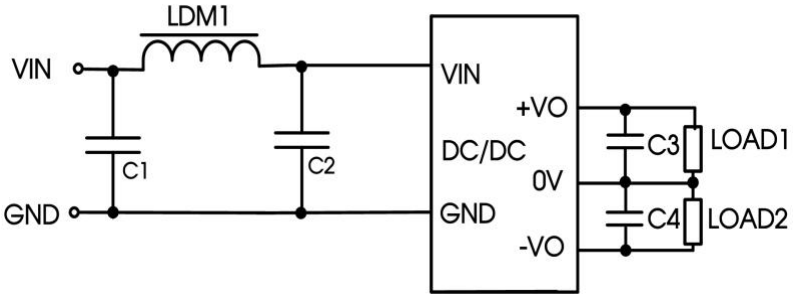
Noted:: C1, C2, C3: 100μF/35V

Recommended Circuit



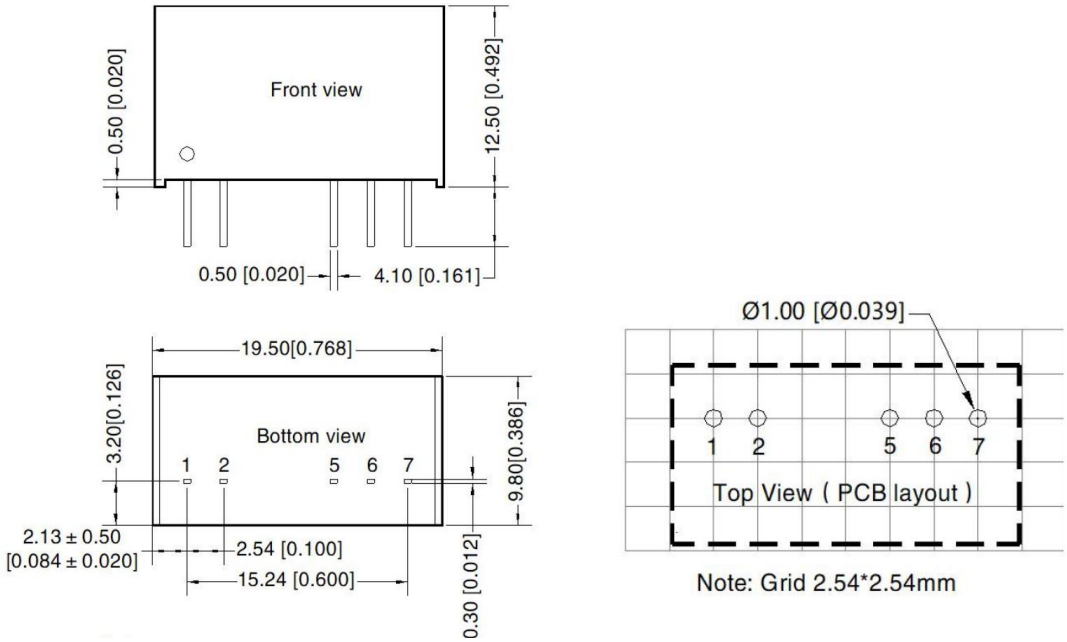
C1/C2/C3
100μF/35V(Low resistance)

EMC Circuit



Device selection			
Project		5V Input model	Other Input model
EMI	C1/C2	4.7μF /16V	1μF/50V
	C3/C4	10μF /50V (Low resistance)	100μF/30V (Low resistance)
	LDM	6.8μH	33μH

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.