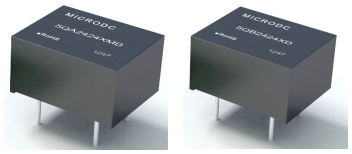
MICRODC
Industry Power Family

5QA-XMD&5QB-XD Series

Isolated 1.25W Dual&Single Output DC-DC Converters



FEATURES

- Industry Standard Pinout
- 1kVDC & 2kVDC Isolation
- Operating Temperature: -40℃～+85℃
- High efficiency up to 80%
- No Heatsink Required
- Internal SMD construction
- Power density up to 0.85W/cm^3
- No Extern. Components Required
- 5V,9V,12V and 15V output
- No heatsink required
- Custom Solutions Available
- UL 94V-0 package materia
- No external components required
- Industry standard pinout
- Power sharing on output
- MTTF up to 3.4 million hours

MODEL SELECTION

5QB①05②05③X④ D⑤

①Product Series ②Input Voltage
③Output Voltage ④Fixed Input
⑤DIP8 Package style

APPLICATIONS

The 5QA-XD & 5QB-XD series of DC/DC converters is particularly suited to isolating and/or converting DC power rails. The galvanic isolation allows the device to be configured to provide an isolated negative rail in systems where only positive rails exist. The wide temperature range guarantees startup from -40°C and full 1.25 watt output at 85°C. For lower ripple,refer to output ripple reduction section.

RoHS MICRODC Green Technology

CE REACH

MICRODC RESERVES THE COPYRIGHT

SELECTION GUIDE

Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
5QB0303XD	3.3	3.3	378	70
5QB0503XD	5	3.3	378	70
5QB0903XD	9	3.3	378	70
5QB1203XD	12	3.3	378	70
5QB1503XD	15	3.3	378	70
5QB2403XD	24	3.3	378	70
5QB0305XD	3.3	5	250	70
5QB0505XD	5	5	250	70
5QB0905XD	9	5	250	70
5QB1205XD	12	5	250	70
5QB1505XD	15	5	250	70
5QB2405XD	24	5	250	70
5QB0309XD	3.3	9	140	78
5QB0509XD	5	9	140	78
5QB0909XD	9	9	140	78
5QB1209XD	12	9	140	78
5QB1509XD	15	9	140	78
5QB2409XD	24	9	140	78
5QB0312XD	3.3	12	104	79
5QB0512XD	5	12	104	79
5QB0912XD	9	12	104	79
5QB1212XD	12	12	104	79
5QB1512XD	15	12	104	79
5QB2412XD	24	12	104	79
5QB0315XD	3.3	15	84	80
5QB0515XD	5	15	84	80
5QB0915XD	9	15	84	80
5QB1215XD	12	15	84	80
5QB1515XD	15	15	84	80
5QB2415XD	24	15	84	80
5QB0324XD	3.3	24	52	80
5QB0524XD	5	24	52	80
5QB0924XD	9	24	52	80
5QB1224XD	12	24	52	80
5QB1524XD	15	24	52	80
5QB2424XD	24	24	52	80

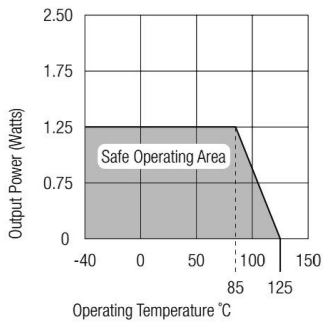
All specif cations typical at TA=25 ° C, nominal input voltage and rated output current unless otherwise specif ed.

SELECTION GUIDE

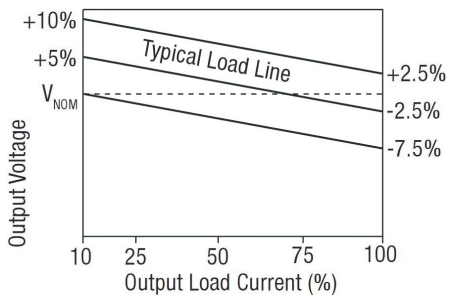
Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
5QA0303XMD	3.3	±3.3	±189	70
5QA0503XMD	5	±3.3	±189	70
5QA0903XMD	9	±3.3	±189	70
5QA1203XMD	12	±3.3	±189	70
5QA1503XMD	15	±3.3	±189	70
5QA2403XMD	24	±3.3	±189	70
5QA0305XMD	3.3	±5	±125	70
5QA0505XMD	5	±5	±125	70
5QA0905XMD	9	±5	±125	70
5QA1205XMD	12	±5	±125	70
5QA1505XMD	15	±5	±125	70
5QA2405XMD	24	±5	±125	70
5QA0309XMD	3.3	±9	±70	75
5QA0509XMD	5	±9	±70	75
5QA0909XMD	9	±9	±70	75
5QA1209XMD	12	±9	±70	75
5QA1509XMD	15	±9	±70	75
5QA2409XMD	24	±9	±70	75
5QA0312XMD	3.3	±12	±52	78
5QA0512XMD	5	±12	±52	78
5QA0912XMD	9	±12	±52	78
5QA1212XMD	12	±12	±52	78
5QA1512XMD	15	±12	±52	78
5QA2412XMD	24	±12	±52	78
5QA0315XMD	3.3	±15	±42	80
5QA0515XMD	5	±15	±42	80
5QA0915XMD	9	±15	±42	80
5QA1215XMD	12	±15	±42	80
5QA1515XMD	15	±15	±42	80
5QA2415XMD	24	±15	±42	80
5QA0324XMD	3.3	±24	±26	80
5QA0524XMD	5	±24	±26	80
5QA0924XMD	9	±24	±26	80
5QA1224XMD	12	±24	±26	80
5QA1524XMD	15	±24	±26	80
5QA2424XMD	24	±24	±26	80

5QAll specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

Temperature derating graph



Tolerance envelope



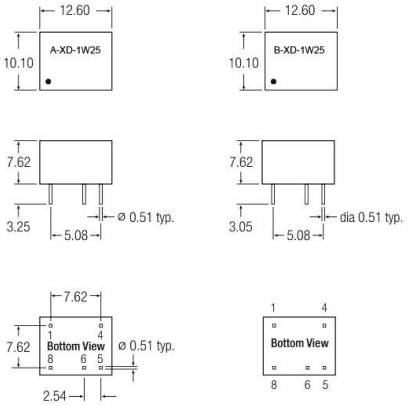
Specifications

Input Voltage		±10%
Input Filter		Capacitor Type
Output Voltage Accuracy		±5%
Line Voltage Regulation		1,2%/1% V Input
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.
	5V output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Ripple and Noise (20MHz limited)		100mVp-p max.
Efficiency at Full Load		70% min.
Isolation Voltage		1.000VDC min. (also available with 2.000VDC)
Isolation Resistance (Viso = 500VDC)		10 GΩmin.
Isolation Capacitance		30pF min./80pF max.
Short Circuit Protection		1 Second
Switching Frequency at Full Load		100kHz typ.
Operating Temperature		–40°C to +85°C (see Graph)
Storage Temperature		-55°C to +125°C
Package Weight	Single output types	1.8g
	Dual output types	1.9g

OUTLINE DIMENSIONS & FOOTPRINT DETAILS

MECHANICAL DIMENSIONS

8 PIN DIP Package



All dimensions in inches ±0.01(mm±0.25mm).All pins on a 0.1(2.54) pitch and within ±0.01(0.25)of true position.

Weight: 1.48g (DIP)1.30g (SIP)

FOOTPRINT DETAILS

Single		Dual	
Pin	Function	Pin	Function
1	-Vin	1	-Vin
4	+Vin	4	+Vin
5	+Vout	5	+Vout
6	NC	6	Com
8	-Vout	8	-Vout

NC：no connect

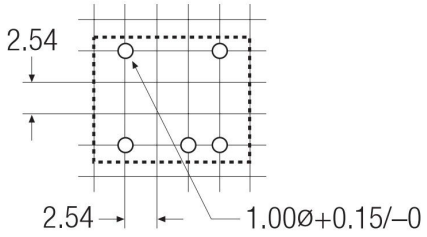
Specif cations can be changed any time without notice.

No parallel connection or plug and play.

Note:

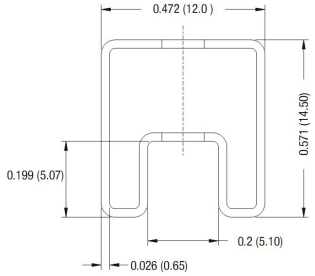
1. The load shouldn't be less than 10%, otherwise ripple will increase dramatically.
2. Operation under 10% load will not damage the converter; However, they may not meet all specification listed.
3. All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
4. In this data sheet, all the test methods of indications are based on corporate standards.

Recommended footprint details



TUBE OUTLINE DIMENSIONS

8 PIN DIP Tube



Unless otherwise stated all dimensions in inches (mm) ±0.5mm.