

**SELECTION GUIDE**

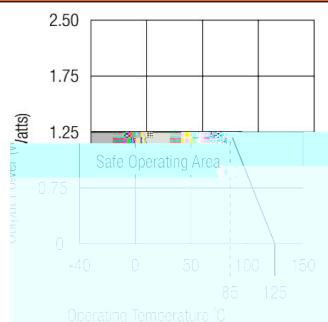
Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
5QB0303XD	3.3	3.3	378	70
5QB0503XD	5	3.3	378	70
5QB0903XD	9	3.3	378	70
5QB1203XD	12	3.3	378	70
5QB1503XD	15	3.3	378	70
5QB2403XD	24	3.3	378	70
5QB0305XD	3.3	5	250	70
5QB0505XD	5	5	250	70
5QB0905XD	9	5	250	70
5QB1205XD	12	5	250	70
5QB1505XD		5	250	70
5QB2405XD		5	250	70
5QB0309XD	3.3	9	140	78
5QB0509XD	5	9	140	78
5QB0909XD	9	9	140	78
5QB1209XD	12			

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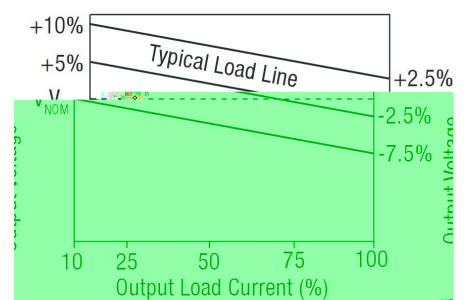
Order code	Input Voltage (V)	Output Voltage (V)	Output Current (MA)	Efficiency (%)
5QA0303XMD	3.3	±3.3	±189	70
5QA0503XMD	5	±3.3	±189	70
5QA0903XMD	9	±3.3	±189	70
5QA1203XMD	12	±3.3	±189	70
5QA1503XMD	15	±3.3	±189	70
5QA2403XMD	24	±3.3	±189	70
5QA0305XMD	3.3	±5	±125	70
5QA0505XMD	5	±5	±125	70
5QA0905XMD	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 G min.
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		FOOTPRINT DETAILS																												
8 PIN DIP Package		Single	Dual																											
<p>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)</p>		<table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> </tr> </tbody> </table>	Pin	Function	P	1			2			3			4			5			6			7			8			
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1																														
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7																														
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		<p>NC: no connect  <b>Specifications can be changed any time without notice.</b>  <b>No parallel connection or plug and play.</b></p> <p>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&lt;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.</p>																												

**Recommended footprint details**

**TUBE OUTLINE DIMENSIONS**

**8 PIN DIP Tube**

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