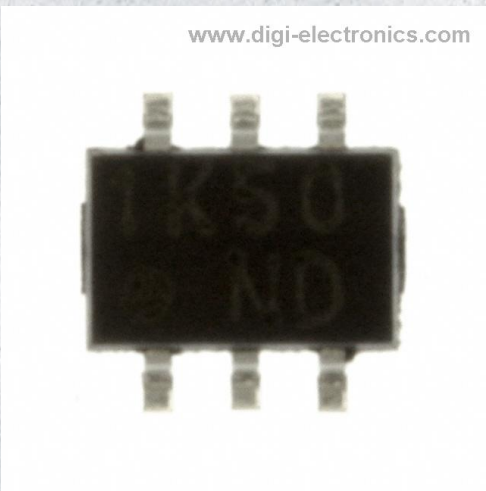
PQ1K503M2ZP Datasheet



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DiGi Electronics Part Number	PQ1K503M2ZP-DG
Manufacturer	Sharp Microelectronics
Manufacturer Product Number	PQ1K503M2ZP
Description	IC REG LINEAR 5V 300MA SOT23L-6
Detailed Description	Switching Regulator IC Output

This model PQ1K503M2ZP is available at DiGi Electronics.

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Manufacturer Product Number:	Manufacturer:
PQ1K503M2ZP	Sharp Microelectronics
Series:	Product Status:
*	Obsolete
Base Product Number:	
PQ1K503	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
RoHS non-compliant	1 (Unlimited)
ECCN:	HTSUS:
EAR99	8542.39.0001

SHARP

Under development	●
New product	

PQ1Kxx3M2ZP Series Low Power-Loss Voltage Regulator

Low Output Current, Compact Surface Mount Type Low Power-Loss Voltage Regulators

■ Features

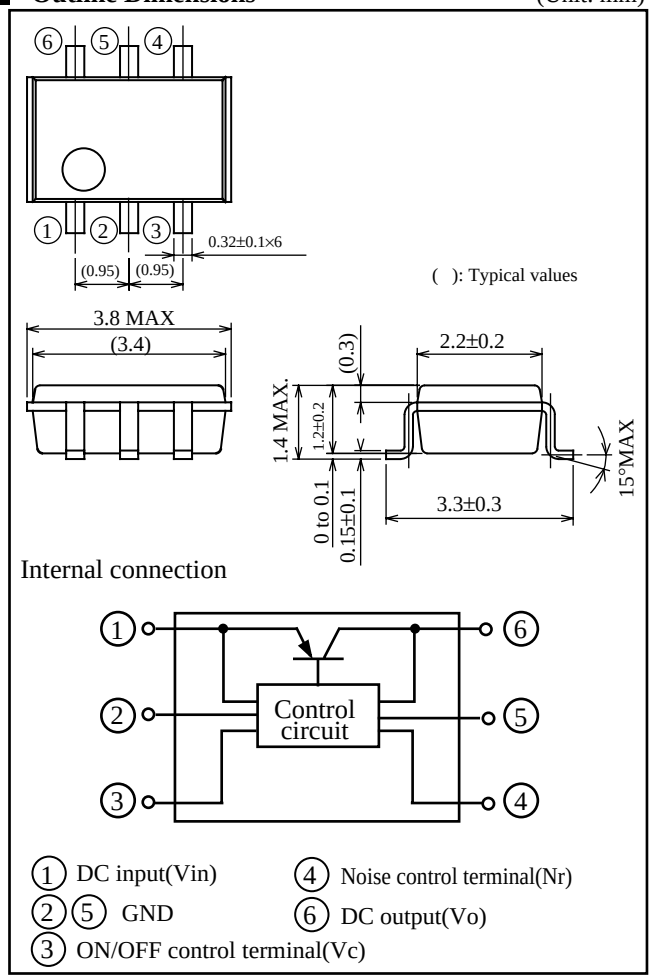
(1) Compact surface mount package(3.4 × 2.2 × 1.2 mm)
(2) Output current : 300mA
(3) Low power-loss
(Dropout voltage: MAX. 0.7 V at Io=300 mA)
(4) High ripple rejection(TYP.70 dB)
(5) Built-in ON/OFF control function
(6) Built-in overcurrent, overheat protection

■ Applications

(1) CD-ROM drives
(2) DVD-ROM drives
(3) Digital Still Cameras

■ Outline Dimensions

(Unit: mm)



■ Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
*1 Input voltage	Vin	9	V
*1 ON/OFF control terminal voltage	Vc	9	V
Output current	Io	300	mA
*2 Power dissipation	Pd	400	mW
*3 Junction temperature	Tj	150	°C
Operating temperature	Topr	-30 to +80	°C
Storage temperature	Tstg	-55 to +150	°C
Soldering temperature	Tsol	260(For 10s)	°C

*1 All are open except GND and applicable terminals.
*2 At surface-mounted condition
*3 Overheat protection may operate at 125≤Tj≤150°C.

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•Specifications are subject to change without notice for improvement.
(Internet)
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SHARP

PQ1Kxx3M2ZP Series Low Power-Loss Voltage Regulator

Electrical Characteristics

(Unless otherwise specified, Vin=Vo(TYP.)+1.0V, Vc=1.8V, Io=30mA.Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output voltage	Vo	-	Refer to the table below.			V
Load regulation	RegL	Io=5mA to 300mA	-	35	160	mV
Line regulation	RegI	Vin=Vo(TYP.)+1V to Vo(TYP.)+6V(MAX. 9V)	-	3.0	20	mV
Temperature coefficient of output voltage	TcVo	Io=10mA, Tj=-25 to +75°C	-	0.05	-	mV/°C
*4 Ripple rejection	RR	-	-	70	-	dB
Output noise voltage	Vno(rms)	10Hz < f < 100kHz Io=30mA, Cn=0.1µF	-	30	-	µV
Dropout voltage	Vi-o1	Io=300mA, *5	-	0.4	0.7	V
*6 ON-state voltage for control	Vc(on)	-	1.8	-	-	V
ON-state current for control	Ic(on)	Vc=1.8V	-	5	30	µA
OFF-state voltage for control	Vc(off)	-	-	-	0.4	V
Quiescent current	Iq	Io=0mA	-	-	500	µA
Output OFF-state dissipation current	Iqs	Vc=0.2V	-	-	1	µA

*4 Typical value at output voltage is 3.0V type.
*5 Dropout voltage when output voltage lowers 100mV from the voltage at Vin=Vo+1V.
*6 In case of opening control terminal ③ ,output voltage turns off.

Output Voltage Line-up

(Vin=Vo(TYP.)+1.0V, Vc=1.8V, Io=30mA.Ta=25∞C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*7 Output voltage	**PQ1K213M2ZP**	VO	–	2.040	2.1	2.160	V
	PQ1K253M2ZP			2.440	2.5	2.560	
	PQ1K303M2ZP			2.940	3.0	3.060	
	PQ1K333M2ZP			3.234	3.3	3.366	
	PQ1K343M2ZP			3.332	3.4	3.468	
	PQ1K353M2ZP			3.430	3.5	3.570	
	PQ1K393M2ZP			3.822	3.9	3.978	
	PQ1K423M2ZP			4.166	4.2	4.284	
	PQ1K503M2ZP			4.900	5.0	5.100	

*7 : It is available for every 0.1V (1.3V to 5V).

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— Office automation equipment
— Telecommunication equipment [terminal]
— Test and measurement equipment
— Industrial control
— Audio visual equipment
— Consumer electronics

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— Gas leakage sensor breakers
— Alarm equipment
— Various safety devices, etc.

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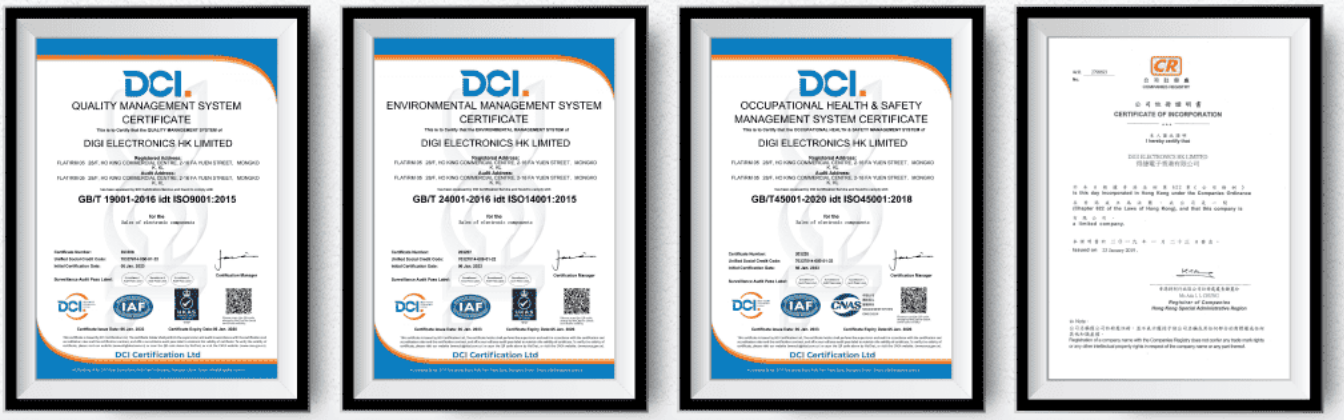

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