SHARP

PQ6RD083 Low Power-Loss Voltage Regulator

High Cost Performance Type Low Power-Loss Voltage Regulator for Power Supply of CRT Display Heater

■ General Description

Sharp's **PQ6RD083** is 6.3V/0.8A output type low power-loss voltage regulator for power supply of CRT display heater(TO-220). It contributes to energy saving due to ON/OFF control function.

■ Features

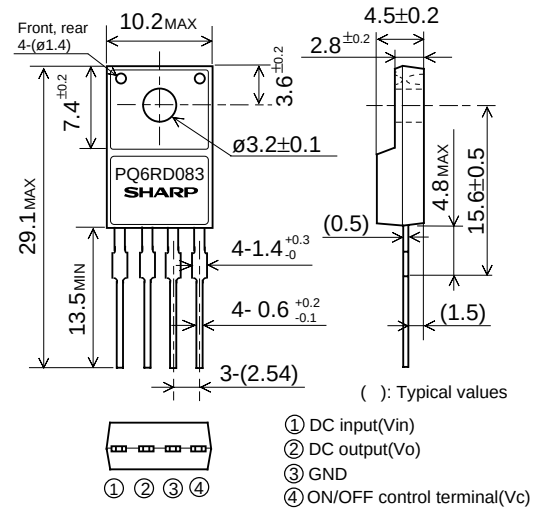
(1) Low power-loss(Dropout voltage: MAX 0.5V at Io=0.5A)
(2) 6.3V/0.8A output type
(3) Compact resin full-mold package(equivalent to TO-220)
(4) Output voltage precision: ±3.0%
(5) Built-in ON/OFF control function
(6) Overcurrent, overheat protection functions
(7) Lead forming type is also available(**PQ6RD83B**).

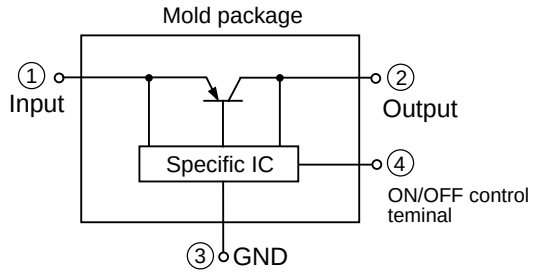
■ Applications

(1) CRT displays
(2) Power supplies for various electronic equipment such as AV, OA

■ Outline Dimensions

(Unit: mm)





(Notice)

• In the absence of device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

• Specifications are subject to change without notice for improvement.

(Internet)

• Data for Sharp's optoelectronic/power devices is provided for internet. (Address http://www.sharp.co.jp/ecg/)

■ Absolute Maximum Ratings

(Ta=25˚C)

Parameter	Symbol	Rating	Unit
*1 Input voltage	V_{in}	20	V
*1 ON/OFF control terminal voltage	V_C	20	V
Output current	I_o	0.8	A
*2 Power dissipation	P_{D1}	1.25	W
	P_{D2}	10	W
*3 Junction temperature	T_j	150	˚C
Operating temperature	T_{opr}	–20 to +80	˚C
Storage temperature	T_{stg}	–40 to +150	˚C
Soldering temperature	T_{sol}	260(For 10s)	˚C

*1 All are open except GND and applicable terminals.

*2 Pd1: No heat sink, Pd2: With infinite heat sink

*3 Overheat protection may operate at 125<=Tj<=150˚C.

■ Electrical Characteristics

(Unless otherwise specified, Vin=8V, Io=0.5A, Ta=25˚C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output voltage	V_o	–	6.111	6.3	6.489	V
Load regulation	R_{egL}	Io=5mA to 0.8A	–	0.1	2.0	%
Line regulation	R_{egI}	Vin=7 to 13V,Io=5mA	–	0.1	2.5	%
Temperature coefficient of output voltage	T_cV_o	Tj=0 to 125˚C, Io=5mA	–	±0.02	–	%/˚C
Ripple rejection	RR	–	45	55	–	dB
*4 ON-state voltage for control	Vc(on)	–	2.0	–	–	V
ON-state current for control	Ic(on)	Vc=2.7V	–	–	20	μA
OFF-state voltage for control	Vc(off)	–	–	–	0.8	V
OFF-state current for control	Ic(off)	Vc=0.4V	–	–	-0.4	mA
Dropout voltage	V_{i-o}	*5, Io=0.5A	–	–	0.5	V
Quiescent current	I_q	Io=0A	–	–	10	mA

*4 In case of opening control terminal ④, output voltage turns on.

*5 Input voltage shall be the value when output voltage is 95% in comparison with the initial value.