



**Electrical Characteristics**

(Unless otherwise specified,  $V_{in}=V_o(TYP.)+1.0V$ ,  $I_o=30mA$ ,  $V_c=1.8V$ ,  $T_a=25^\circ C$ )

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output voltage	$V_o$	—	Refer to the table below			V
Load regulation	$R_{egL}$	$I_o=5mA$ to $300mA$	—	35	160	mV
Line regulation	$R_{egI}$	$V_{IN}=V_o(TYP.)+1V$ to $V_o(TYP.)+6V(MAX. 9V)$	—	3.0	20	mV
Temperature coefficient of output voltage	$T_c V_o$	$I_o=10mA, T_j=-25$ to $+75^\circ C$	—	0.05	—	mV/ $^\circ C$
<sup>※4</sup> Ripple rejection	RR	—	—	70	—	dB
<sup>※4</sup> Output noise voltage	$V_{no(rms)}$	$10Hz < f < 100kHz$ , $I_o=30mA, C_n=0.1\mu F$	—	30	—	$\mu V$
Dropout voltage	$V_{I-O}$	$I_o=300mA, \text{※5}$	—	—	0.7	V
<sup>※6</sup> ON-state voltage for control	$V_{c(on)}$	—	1.8	—	—	V
ON-state current for control	$I_{c(on)}$	$V_c=1.8V$	—	5	30	$\mu A$
OFF-state voltage for control	$V_{c(off)}$	—	—	—	0.4	V
Quiescent current	$I_q$	$I_o=0mA$	—	—	500	$\mu A$
Output OFF-state dissipation current	$I_{qs}$	$V_c=0.2V$	—	—	1	$\mu A$

<sup>※4</sup> Typical value at output voltage is 3.0V type.

<sup>※5</sup> Input voltage when output voltage lowers 100m V from the voltage at  $V_{in}=V_o(TYP.)+1.0V$ .

<sup>※6</sup> In case of opening control terminal ③, output voltage turns off.

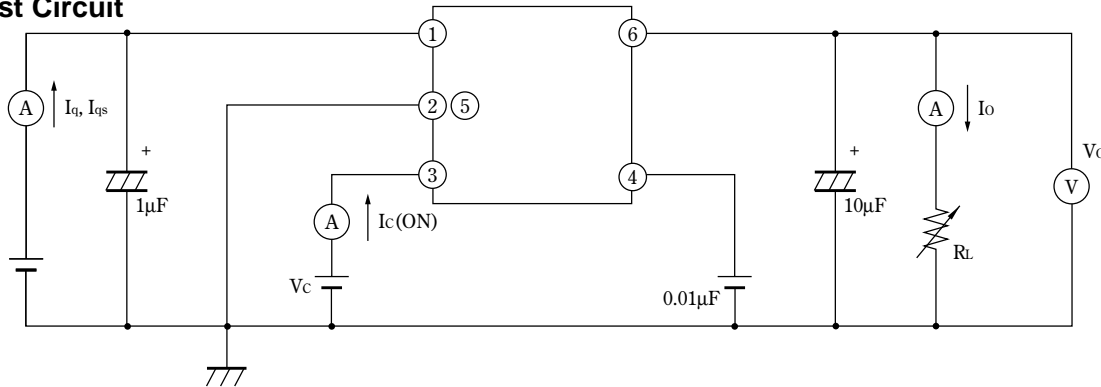
**Output Voltage Line-up**

( $V_{IN}=V_o(TYP.)+1.0V, I_o=30mA, V_c=1.8V, T_a=25^\circ C$ )

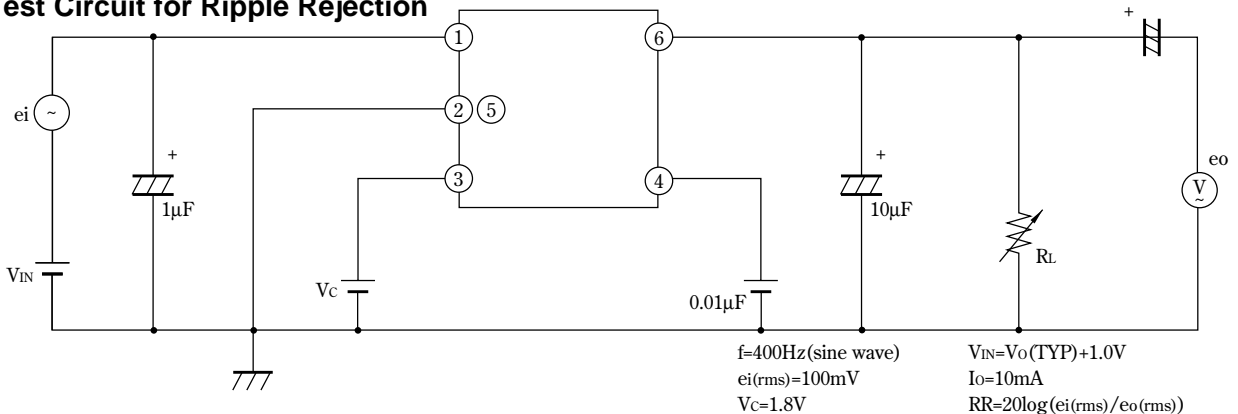
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
<sup>※7</sup> Output voltage	PQ1K183M2ZP	—	1.740	1.8	1.860	V
	PQ1K213M2ZP		2.040	2.1	2.160	
	PQ1K253M2ZP		2.440	2.5	2.560	
	PQ1K303M2ZP		2.940	3.0	3.060	
	PQ1K333M2ZP		3.234	3.3	3.366	
	PQ1K343M2ZP		3.332	3.4	3.468	
	PQ1K503M2ZP		4.900	5.0	5.100	

<sup>※7</sup> It is available for every 0.1V (1.3V to 5V)

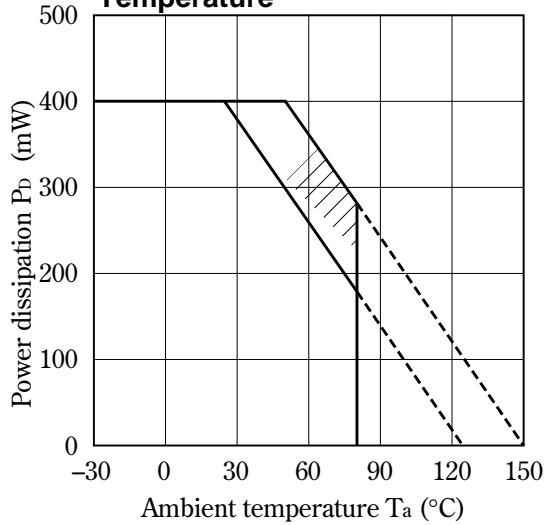
**Fig.1 Test Circuit**



**Fig.2 Test Circuit for Ripple Rejection**

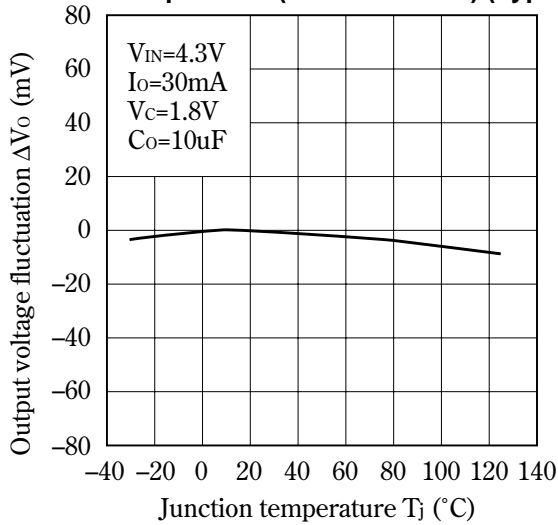


**Fig.3 Power Dissipation vs. Ambient Temperature**

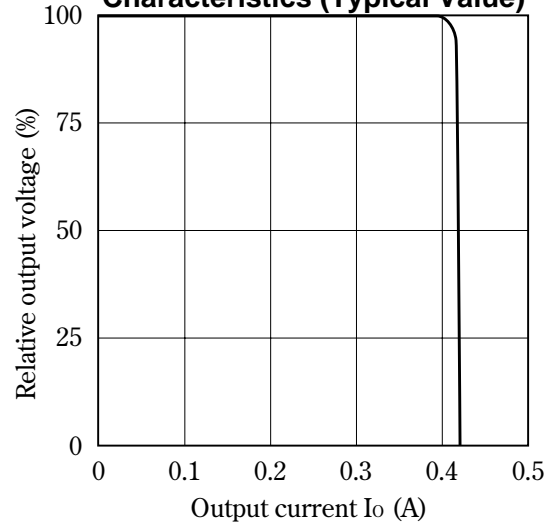


Note) Oblique line portion: Overheat protection may operate in this area.

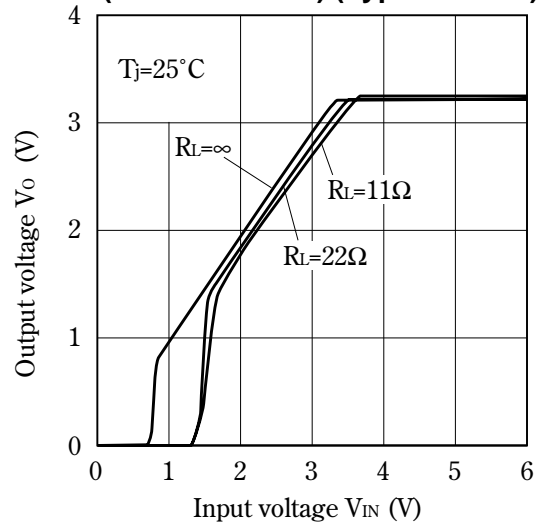
**Fig.5 Output Voltage Fluctuation vs. Junction Temperature (PQ1K333M2ZP) (Typical Value)**



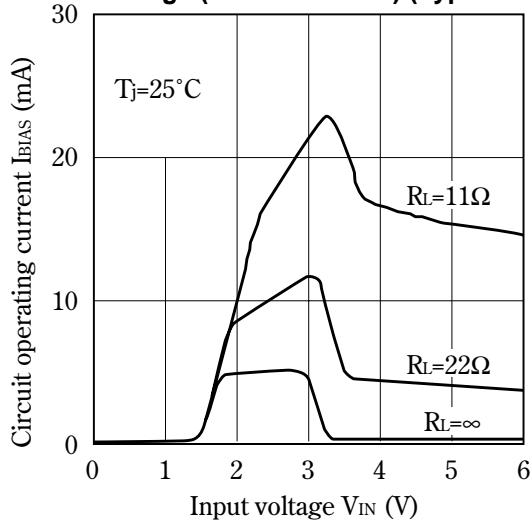
**Fig.4 Overcurrent Protection Characteristics (Typical Value)**



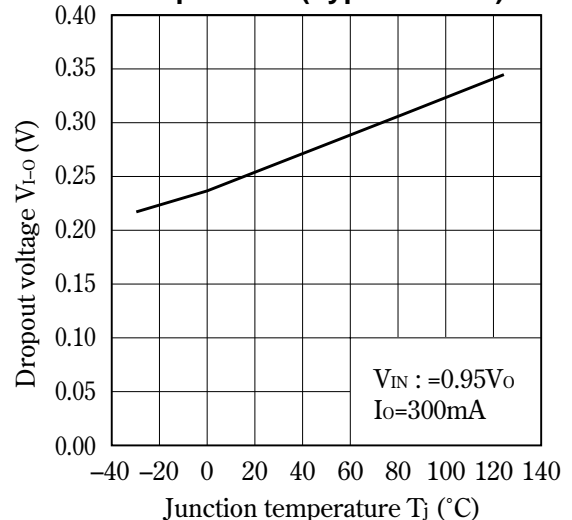
**Fig.6 Output Voltage vs. Input Voltage (PQ1K333M2ZP) (Typical Value)**



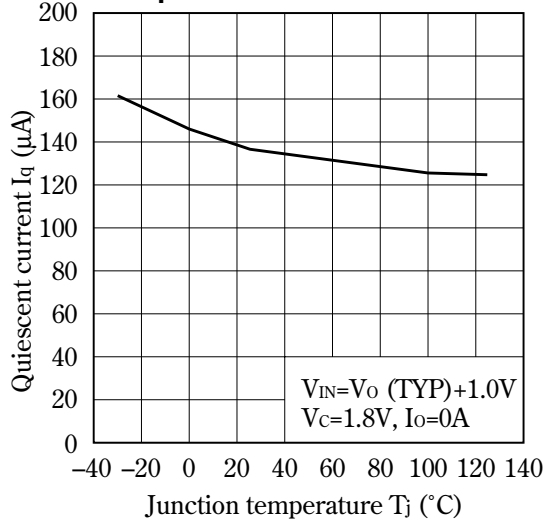
**Fig.7 Circuit Operating Current vs. Input Voltage (PQ1K333M2ZP) (Typical Value)**



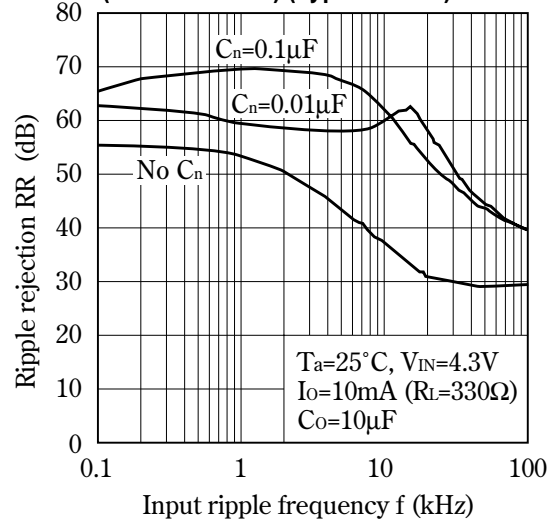
**Fig.8 Dropout Voltage vs. Junction Temperature (Typical Value)**



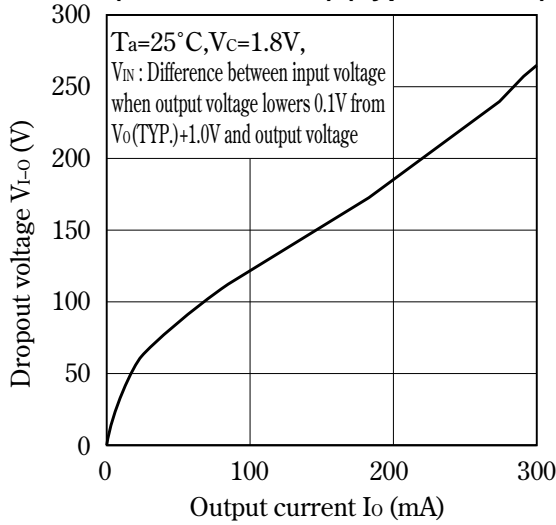
**Fig.9 Quiescent Current vs. Junction Temperature**



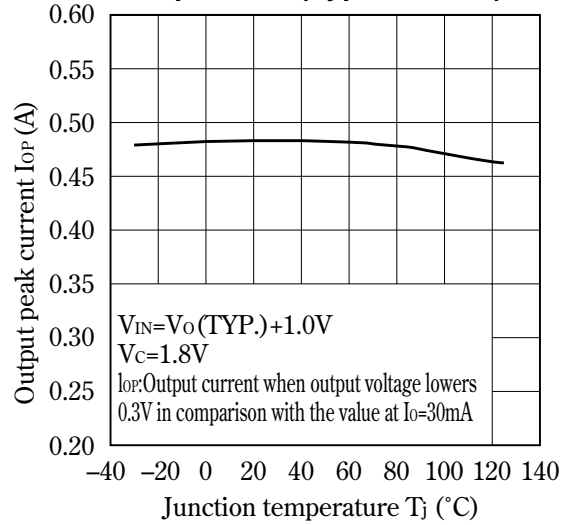
**Fig.10 Ripple Rejection vs. Input Ripple Frequency (PQ1K333M2ZP) (Typical Value)**



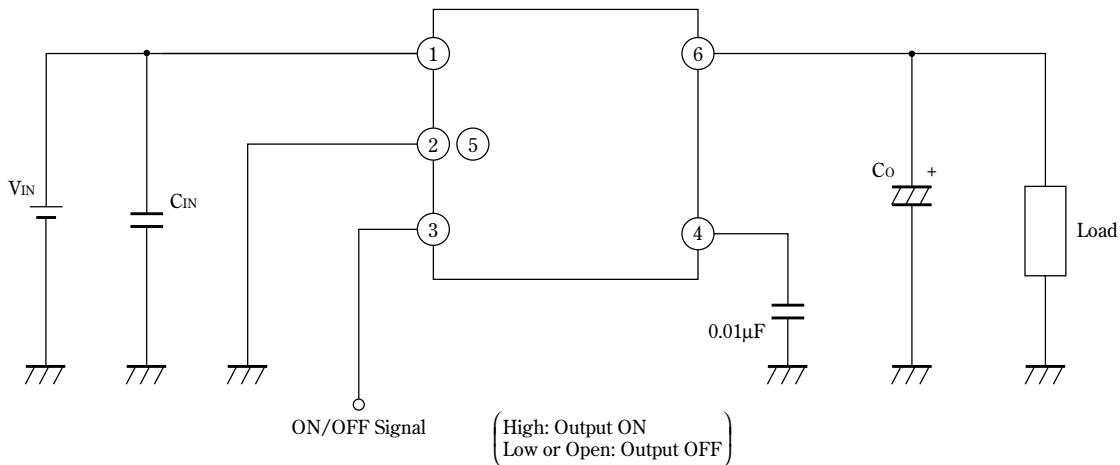
**Fig.11 Dropout Voltage vs. Output Current (PQ1K333M2ZP) (Typical Value)**



**Fig.12 Output Peak Current vs. Junction Temperature (Typical Value)**



■ ON/OFF Operation



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