

Electrical Characteristics

(Unless otherwise specified, condition shall be $V_{IN}=12V$, $I_o=0.5A$, $V_o=5V$, ON-OFF terminals is open, $T_a=25^\circ C$)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output saturation voltage	V_{SAT}	$I_{SW}=3A$	-	1.4	1.8	V
Reference voltage	V_{ref}	-	1.235	1.26	1.285	V
Reference voltage temperature fluctuation	ΔV_{ref}	$T_j=0$ to $125^\circ C$	-	± 0.5	-	%
Load regulation	$ R_{regL} $	$I_o=0.5$ to $3A$	-	0.2	1.5	%
Line regulation	$ R_{regI} $	$V_{IN}=8$ to $35V$	-	1	2.5	%
Efficiency	η	$I_o=3A$	-	80	-	%
Oscillation frequency	f_o	-	135	150	165	kHz
Oscillation frequency temperature fluctuation	Δf_o	$T_j=0$ to $125^\circ C$	-	± 2	-	%
Overcurrent detecting level	I_L	-	3.6	4.7	5.8	A
Charge current	I_{CHG}	②, ④ terminals is open, ⑤ terminal	-	-10	-	μA
Input threshold voltage	V_{THL}	Duty ratio=0%, ④ terminal=0V, ⑤ terminal	-	1.3	-	V
	V_{THH}	Duty ratio=100%, ④ terminals is open, ⑤ terminal	-	2.3	-	V
ON threshold voltage	$V_{TH(ON)}$	④ terminal=0V, ⑤ terminal	0.7	0.8	0.9	V
Stand-by current	I_{SD}	$V_{IN}=40V$, ⑤ terminal=0V	-	140	400	μA
Output OFF-state dissipation current	I_{OS}	$V_{IN}=40V$, ⑤ terminal=0.9V	-	8	16	mA

Fig.1 Test Circuit

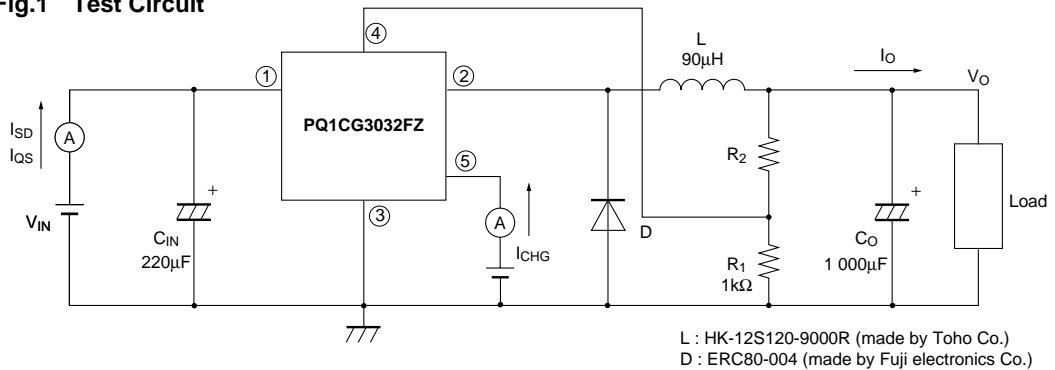


Fig.2 Power Dissipation vs. Ambient Temperature

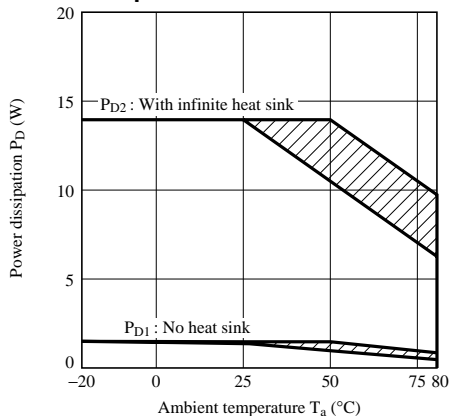


Fig.3 Overcurrent Protection Characteristics (Typical Value)

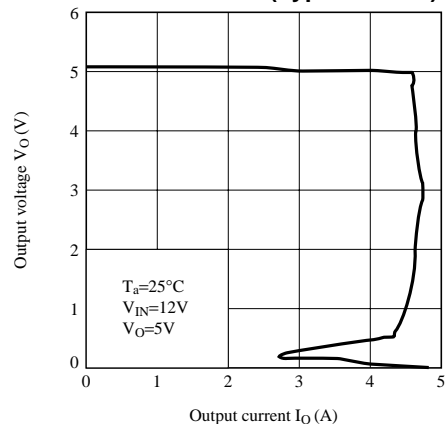


Fig.4 Efficiency vs. Input Voltage

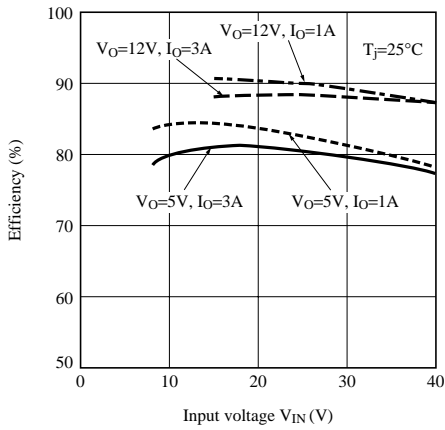


Fig.5 Output Saturation Voltage vs. Switching Current

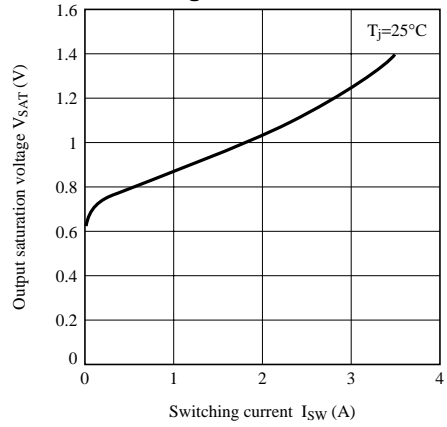


Fig.6 Stand-by Current vs. Input Voltage

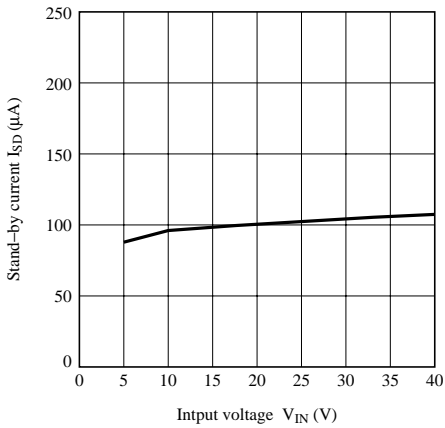


Fig.7 Reference Voltage Fluctuation vs. Junction Temperature

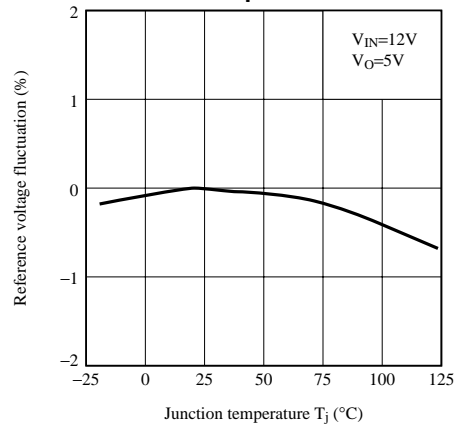


Fig.8 Load Regulation vs. Output Current

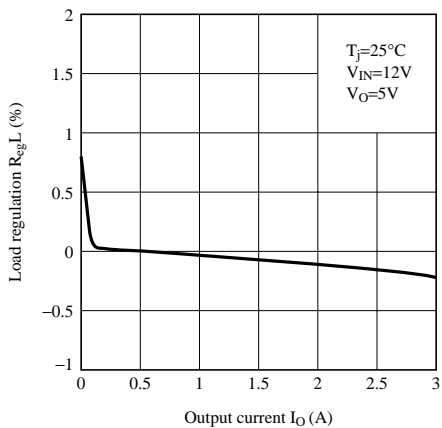


Fig.9 Line Regulation vs. Input Voltage

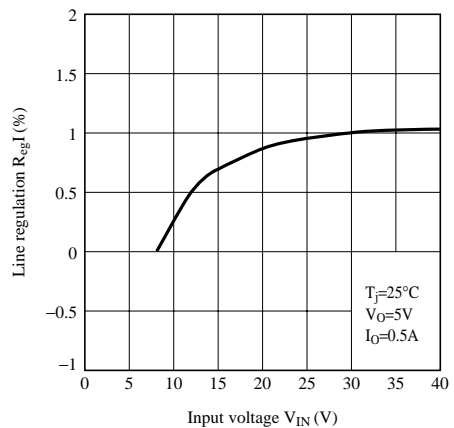


Fig.10 Oscillation Frequency Fluctuation vs. Junction Temperature

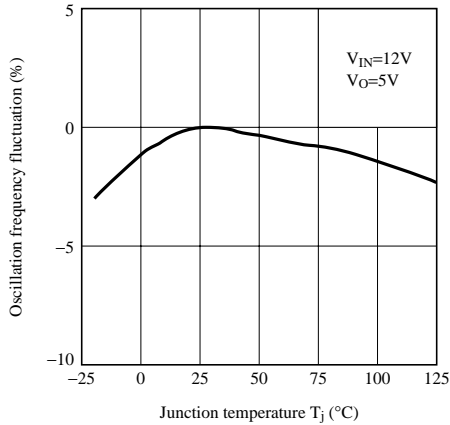


Fig.11 Overcurrent Detecting Level Fluctuation vs. Junction Temperature

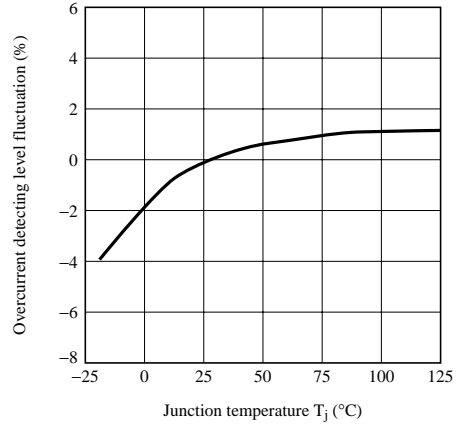


Fig.12 Threshold Voltage vs. Junction Temperature

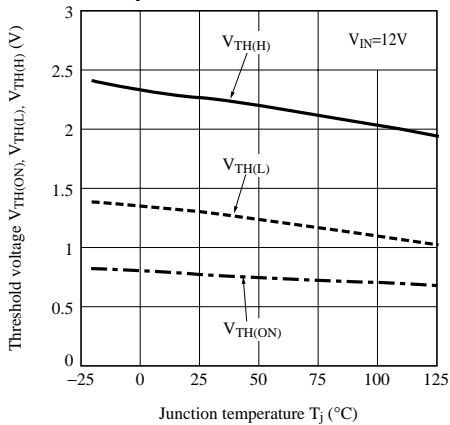


Fig.13 Operating Dissipation Current vs. Input Voltage

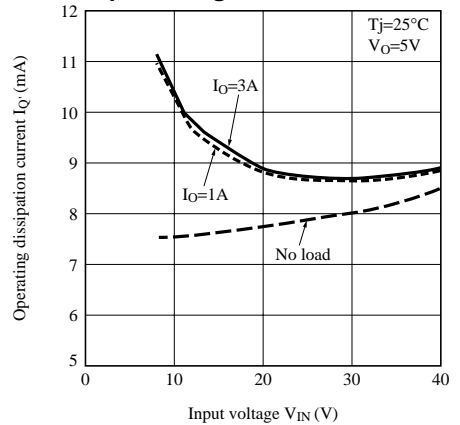


Fig.14 Block Diagram

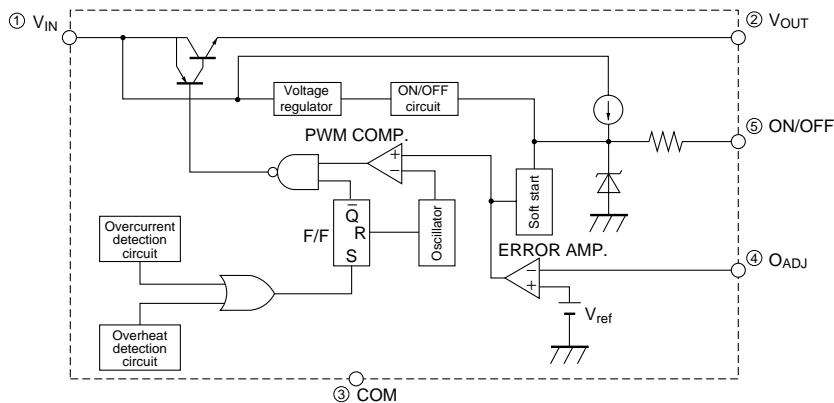


Fig.15 Step Down Type Circuit Diagram

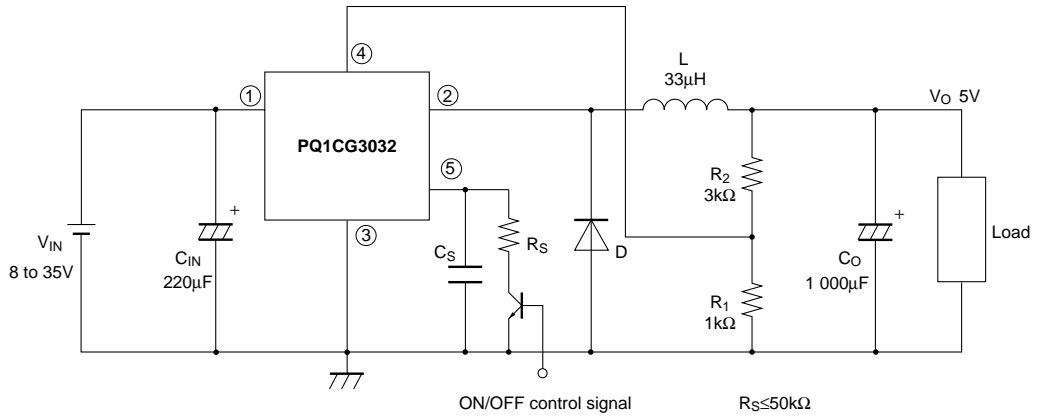
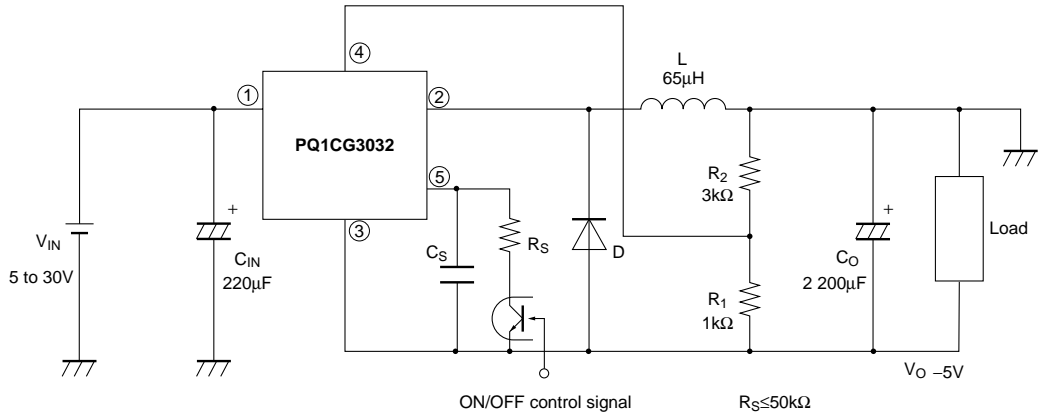


Fig.16 Polarity Inversion Type Circuit Diagram



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