

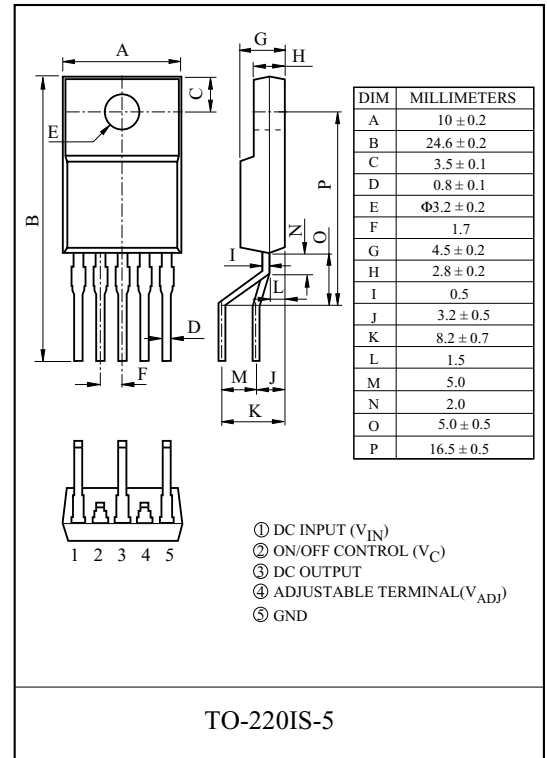
2.0A Adjustable Output Low Drop Voltage Regulator with Output ON/OFF control Function.

FEATURES

- 2.0A Output Low Dropout Voltage Regulator.
- Very Low Dropout Voltage : 0.5V/Max ($I_{OUT}=2.0A$)
- Built-in ON/OFF Control Terminal. : Active High
- Built-in Over Current, Over Heat Protection Function, ASO Protection Functions.
- Low Quiescent Current (Output OFF mode) : 0.5 μ A(Typ.)
- Adjustable Output Voltage Type : $V_{OUT}=V_{ref}\sim 7V$
- Low Voltage Operation : $V_{opr}(min.)=2.35V$.

MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Input Voltage	V_{IN}	10	V
ON/OFF Control Voltage	V_C	10	V
Adjustable Terminal Voltage	V_{ADJ}	7	V
Output Current	I_{OUT}	2.0	A
Power Dissipation 1 (No heatsink)	P_{D1}	1.5	W
Power Dissipation 2 (Infinite Heatsink)	P_{D2}	15	W
Junction Temperature	T_j	150	°C
Operating Temperature	T_{opr}	-40 ~ 85	°C
Storage Temperature	T_{stg}	-40 ~ 150	°C



ELECTRICAL CHARACTERISTICS (Unless otherwise specified, $V_{IN}=5V$, $V_O=3.3V$, $R_1=1k\Omega$, $T_j=25^\circ C$)

CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Voltage	V_{IN}	-	2.35	-	10	V
Output Voltage	V_{OUT}	-	V_{ref}	-	7	V
Reference Voltage	V_{ref}	-	1.22	1.25	1.28	V
Load Regulation	Reg Load	$I_O=5mA\sim 2A$	-	0.2	2	%
Line Regulation	Reg Line	$V_{IN}=4V\sim 10V$, $I_O=5mA$	-	0.2	1	%
Temperature Coefficient of Output Voltage	$T_C V_O$	$T_j=0\sim 125^\circ C$, $I_O=5mA$	-	± 1.0	-	%
Ripple Rejection	$R \cdot R$	$I_{OUT}=0.3A$, $f=120Hz$, $V_{ripple}=0.5V_{rms}$, $V_{IN}=5V$, $V_{OUT}=3V$	45	60	-	dB
Dropout Voltage	V_D	-	-	-	0.5	
Output ON state for control Voltage	$V_{C(ON)}$	-	2.0	-	-	V
Output ON state for control Current	$I_{C(ON)}$	$V_C=2.7V$	-	-	200	μA
Output OFF state for control Voltage	$V_{C(OFF)}$	-	-	-	0.8	V
Output OFF state for control Current	$I_{C(OFF)}$	$V_C=0.4V$	-	-	-0.4	μA
Quiescent Current	I_Q	$I_O=0$	-	1	2	mA
Quiescent Current (OFF Mode)	$I_{Q(OFF)}$	$V_C=0.4V$	-	0.5	5	μA

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Fig. 1 Test Circuit

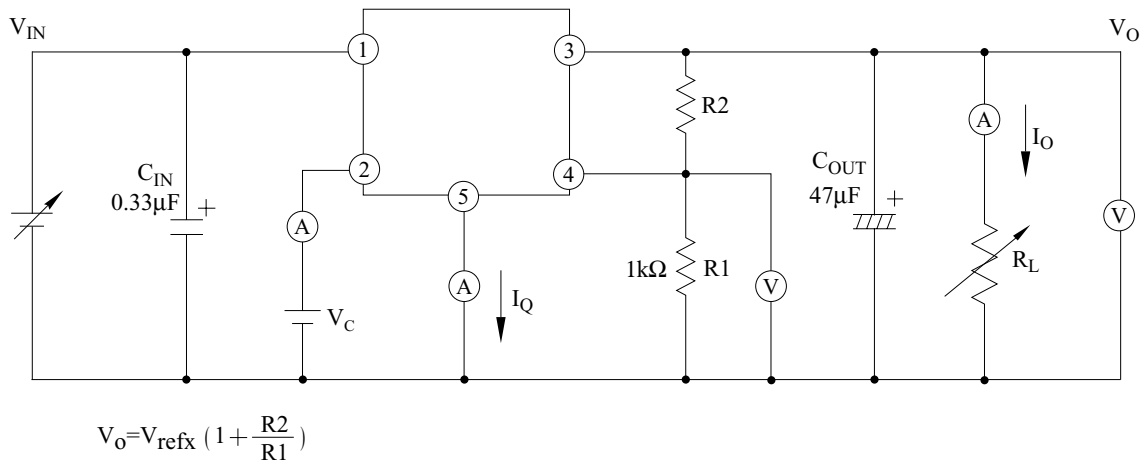


Fig. 2 Ripple Rejection Circuit

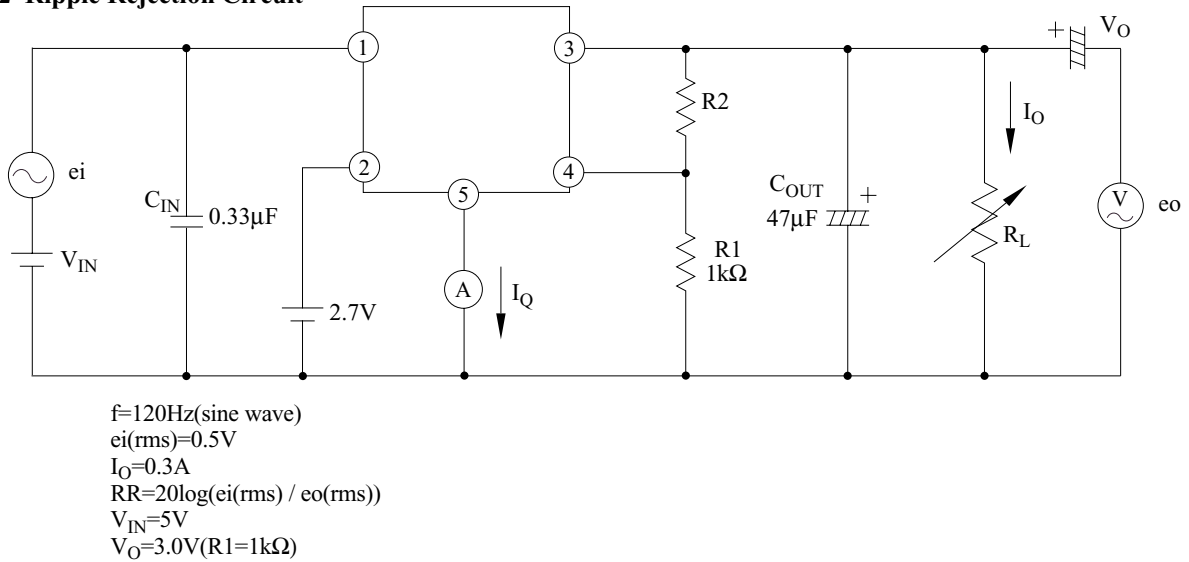


Fig. 3 Typical Application Circuit

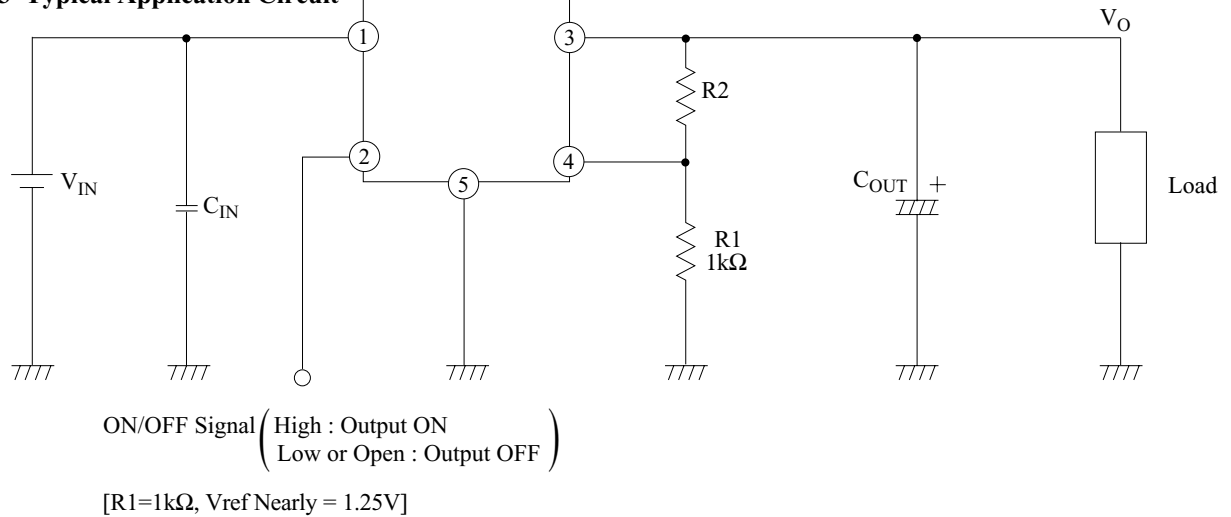


Fig. 4 $I_O - V_O$

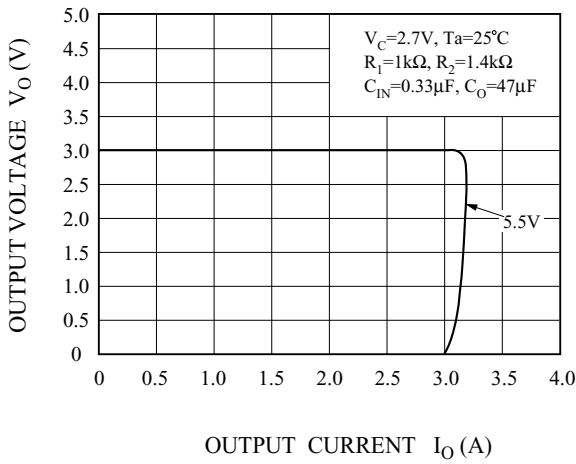


Fig. 5 $T_a - \Delta V_{ref}$

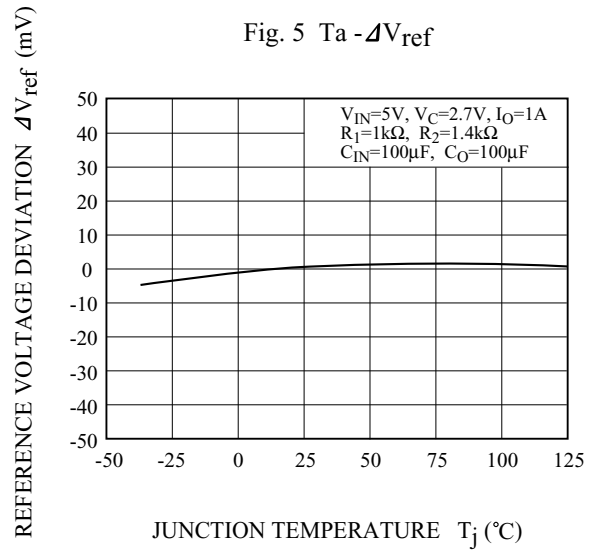


Fig. 6 $V_{IN} - V_O$

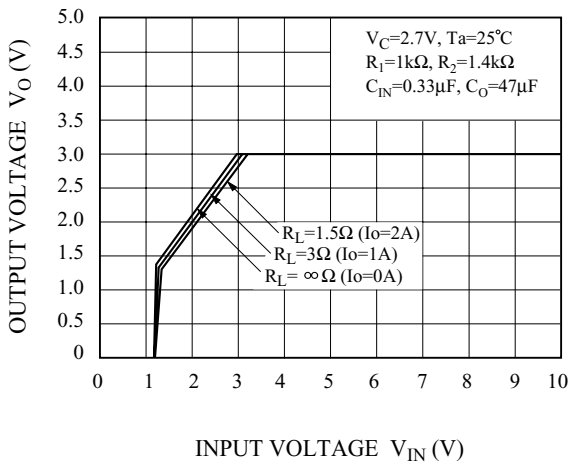


Fig. 7 $V_{IN} - I_{BIAS}$

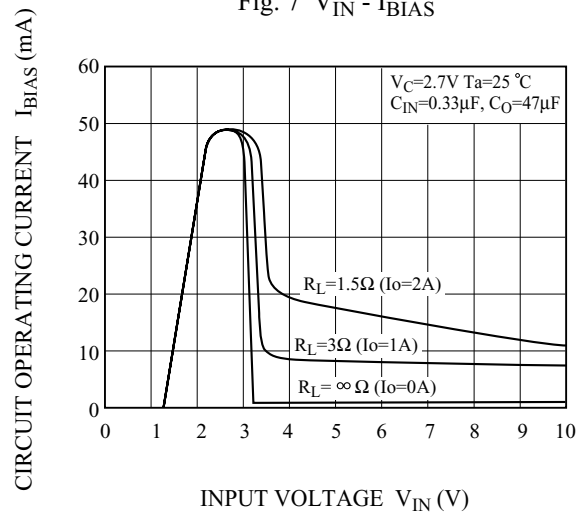


Fig. 8 $T_j - V_D$

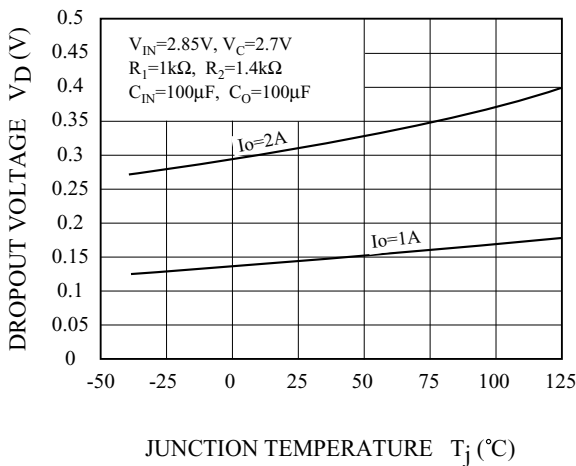
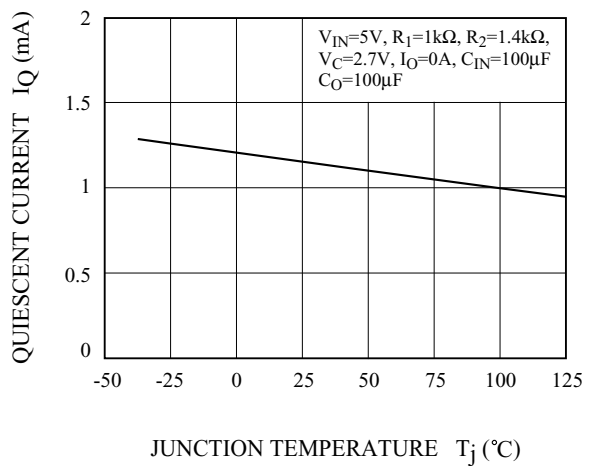


Fig. 9 $T_j - I_Q$



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Fig.10 f_{RIP} - R.R

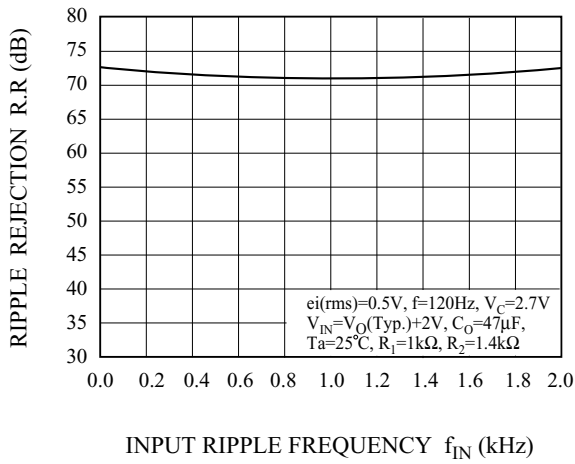


Fig. 11 I_{OUT} - R.R

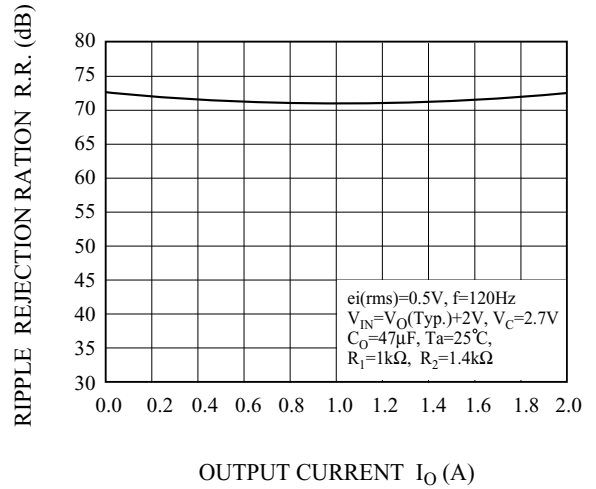


Fig. 12 P_D - T_a

