

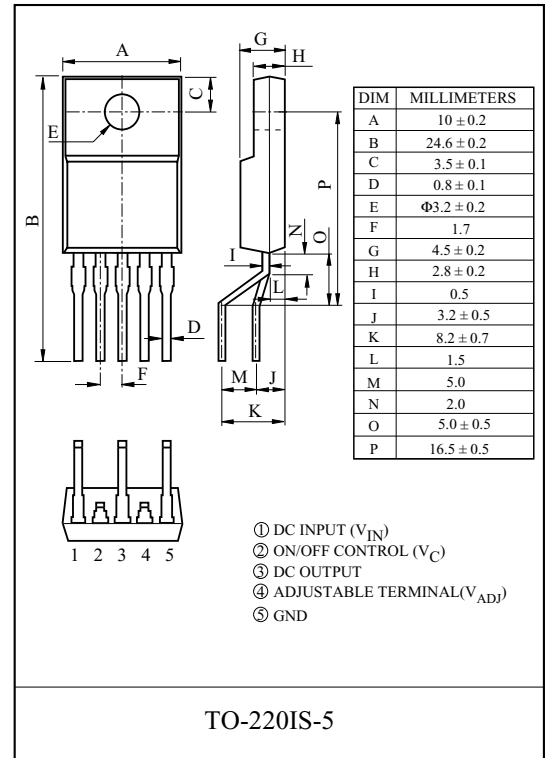
### 2.0A Adjustable Output Low Drop Voltage Regulator with Output ON/OFF control Function.

#### 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 $\mu$ 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

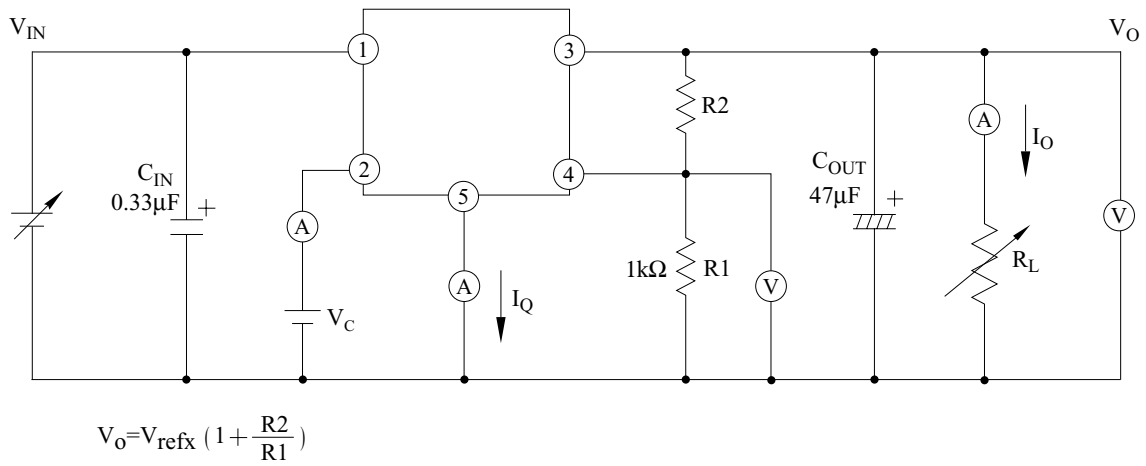


#### ELECTRICAL CHARACTERISTICS (Unless otherwise specified, $V_{IN}=5V$ , $V_O=3.3V$ , $R_1=1k\Omega$ , $T_j=25^\circ C$ )

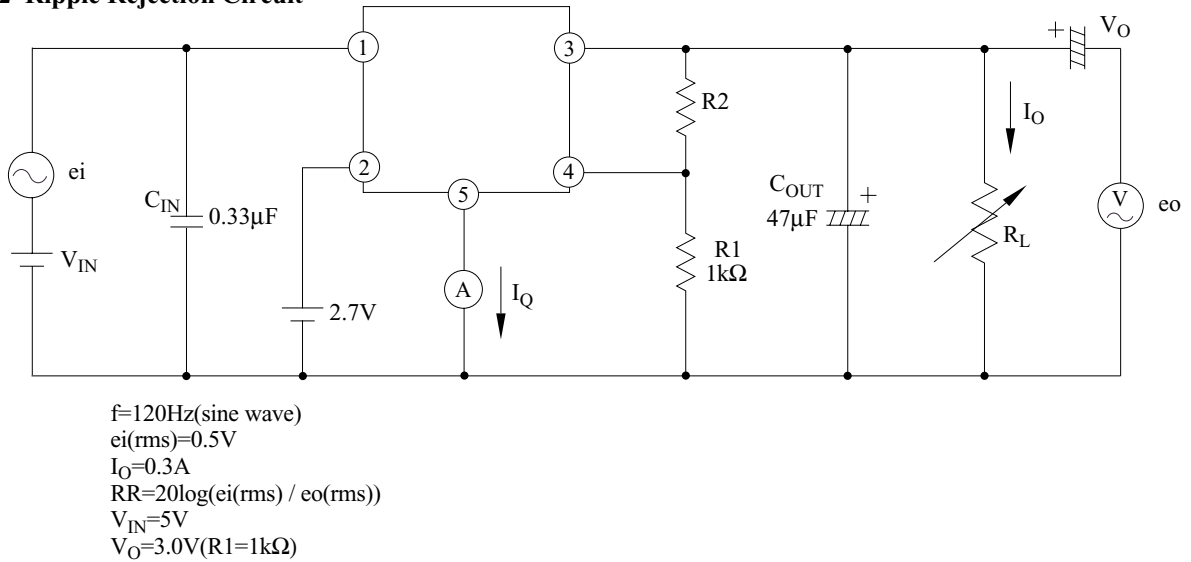
CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Voltage	$V_{IN}$	-	2.35	-	10	V
Output Voltage	$V_{OUT}$	-	$V_{ref}$	-	7	V
Reference Voltage	$V_{ref}$	-	1.22	1.25	1.28	V
Load Regulation	Reg Load	$I_O=5mA\sim 2A$	-	0.2	2	%
Line Regulation	Reg Line	$V_{IN}=4V\sim 10V$ , $I_O=5mA$	-	0.2	1	%
Temperature 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	$\mu A$
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	$\mu A$
Quiescent Current	$I_Q$	$I_O=0$	-	1	2	mA
Quiescent Current (OFF Mode)	$I_{Q(OFF)}$	$V_C=0.4V$	-	0.5	5	$\mu A$

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**Fig. 1 Test Circuit**



**Fig. 2 Ripple Rejection Circuit**



**Fig. 3 Typical Application Circuit**

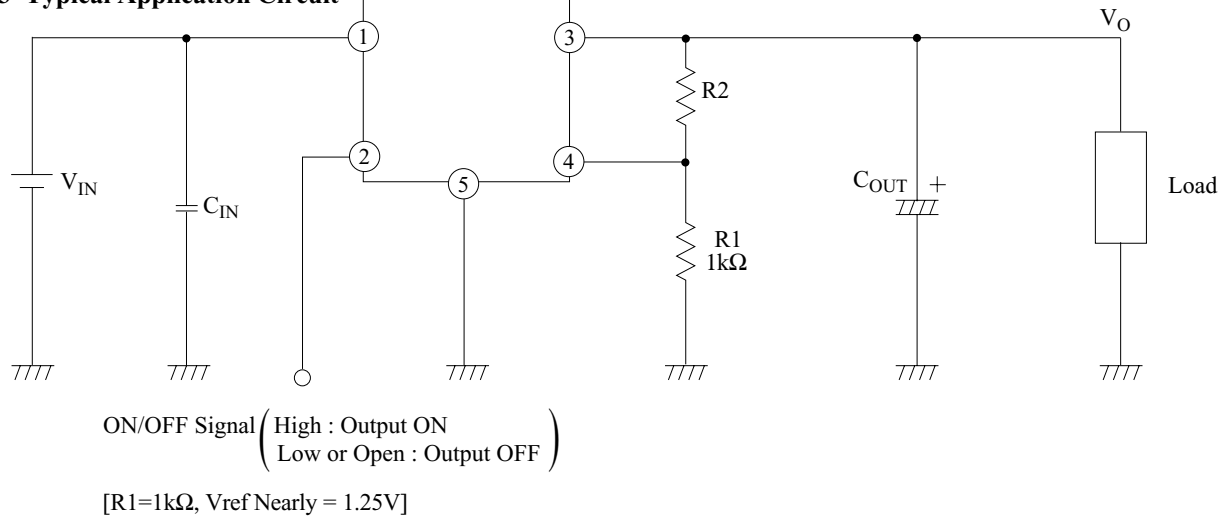


Fig. 4  $I_O - V_O$

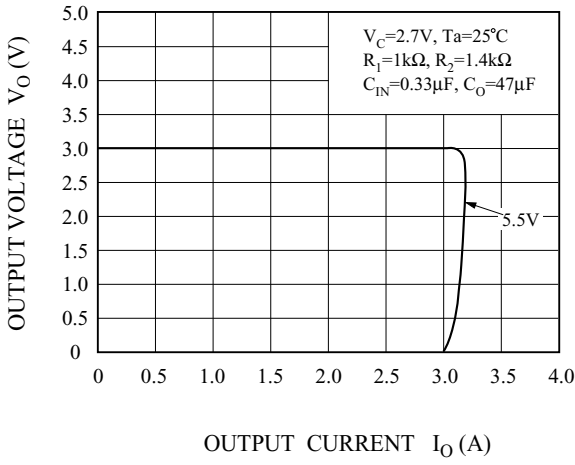


Fig. 5  $T_a - \Delta V_{ref}$

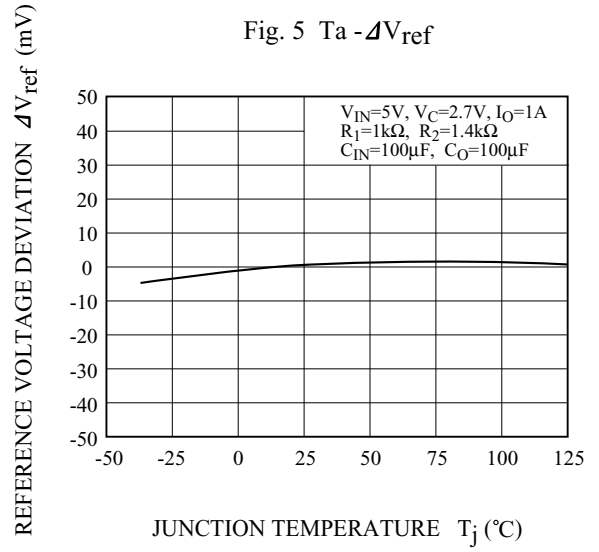


Fig. 6  $V_{IN} - V_O$

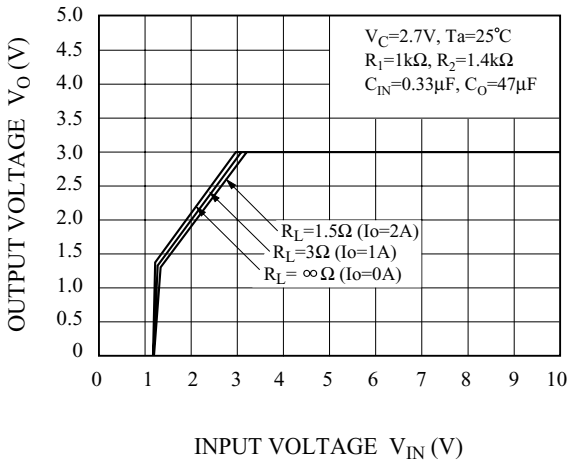


Fig. 7  $V_{IN} - I_{BIAS}$

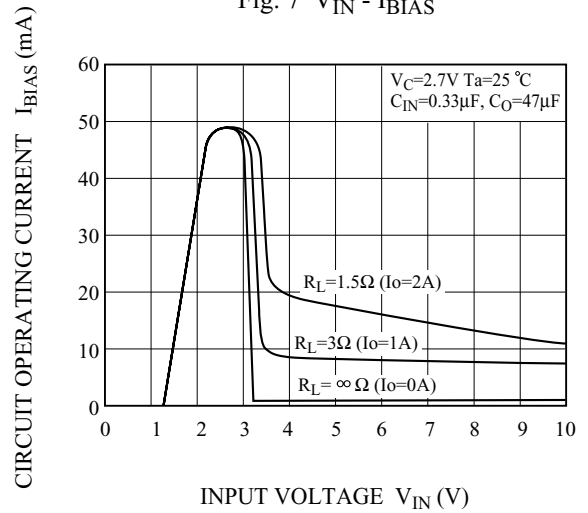


Fig. 8  $T_j - V_D$

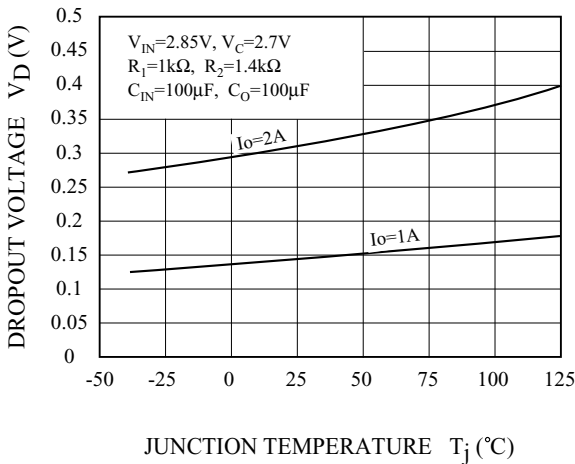
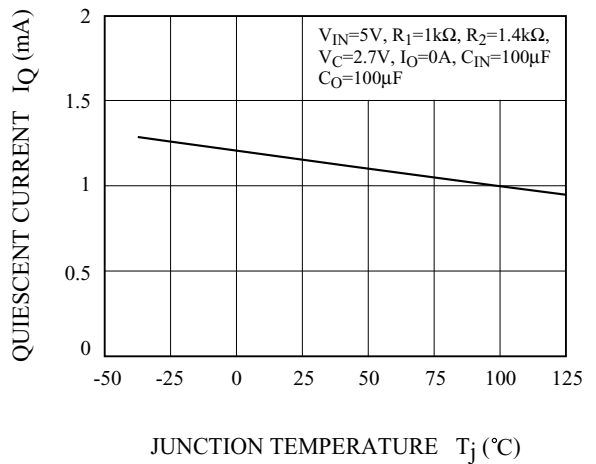


Fig. 9  $T_j - I_Q$



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Fig.10  $f_{RIP}$  - R.R

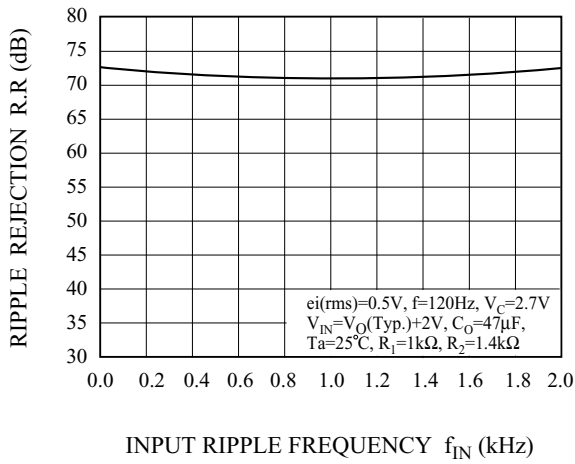


Fig. 11  $I_{OUT}$  - R.R

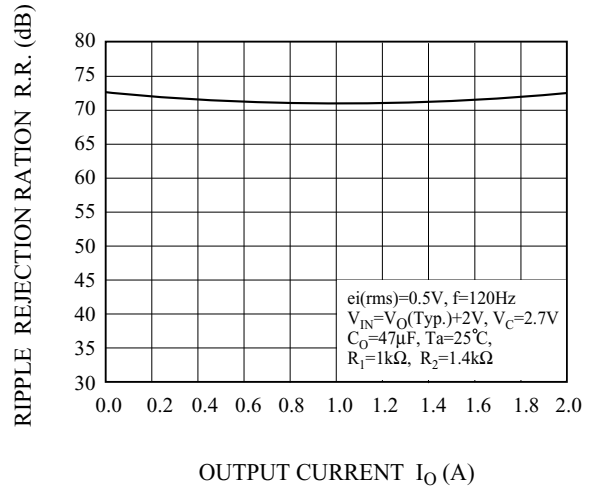


Fig. 12  $P_D$  -  $T_a$

