
1A Low Dropout Voltage Regulator With ON/OFF Control KIA78RXX

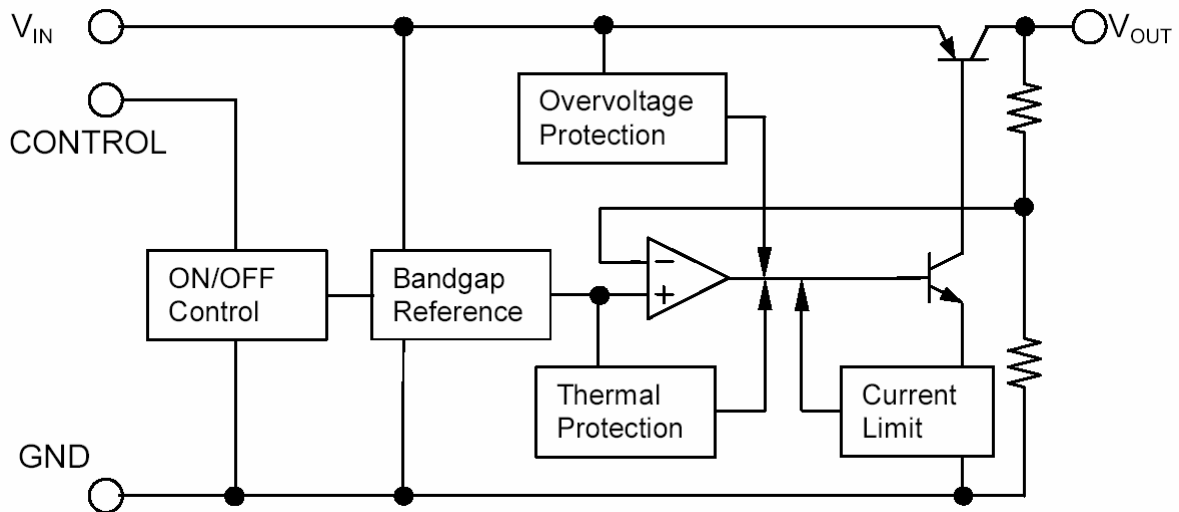
DESCRIPTIONS:

The KIA78RXX is a low dropout voltage regulator suitable for various electronic equipment. The output current is up to 1.0A and dropout voltage is 0.5V typ. at $I_o=1.0A$. This regulator has various function such as peak current protection, thermal shut down, over voltage protection and output disable function. The KIA78RXX is available in TO-252-5L, TO-220F-4 power package.

FEATURES

- 1.0A output low dropout voltage regulator.
- Built in ON/OFF control terminal.
- Built in over current protection, over heat protection function.

BLOCK DIAGRAM



Output Current		1	A
Power Dissipation 1 (no heatsink)		1.5	W
Power Dissipation 2 (with heatsink)	TO-252-5L	10	W
	TO-220F-4	15	
Junction Temperature		125	°C
Operating Temperature		-20~80	°C
Storage Temperature		-30~125	°C
Soldering Temperature (10sec)		260	°C

ELECTRICAL CHARACTERISTICS

(unless otherwise specified: $I_o=0.5A, T_a=25^{\circ}C$)

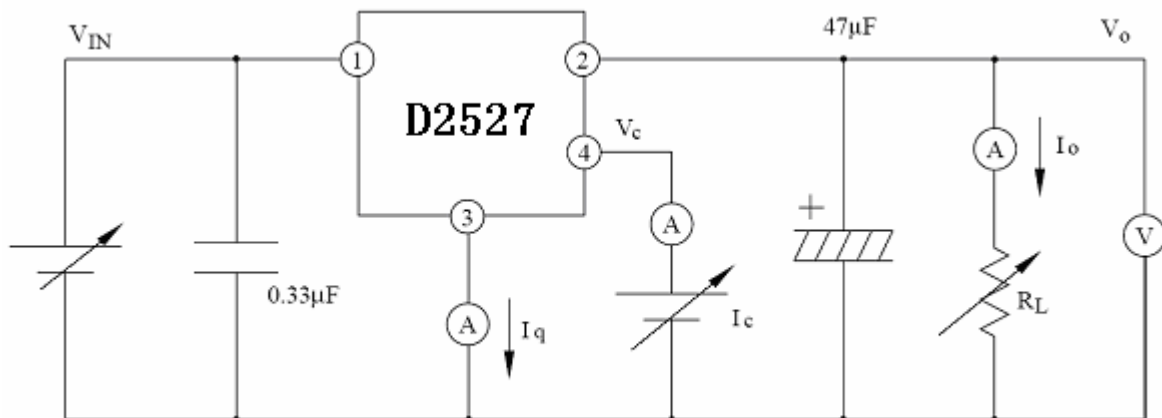
Characteristics	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_{out}	Note1	-2% V_o		2% V_o	V
Load regulation	R_{load}	$I_o=5mA \sim 2A$		0.1	2.0	%
Line regulation	R_{line}	Note2		0.5	2.5	%
Temperature coefficient of output voltage	$T_c V_o$	$T_j=0 \sim 125^{\circ}C$		± 0.02	± 0.05	%/°C
Ripple rejection	R.R		45	55		dB
Drop out voltage	V_D	$I_o=1A, \text{Note3}$			0.5	V
Output ON state for control voltage	$V_{C(ON)}$		2.0			V
Output ON state for control current	$I_{C(ON)}$	$V_c=2.7V$			20	μA
Output OFF state for control voltage	$V_{C(OFF)}$				0.8	V
Output OFF state for control current	$I_{C(OFF)}$	$V_c=0.4V_o$			-0.4	mA
Quiescent current	I_Q	Note1, $I_o=0$			10	mA

Note:

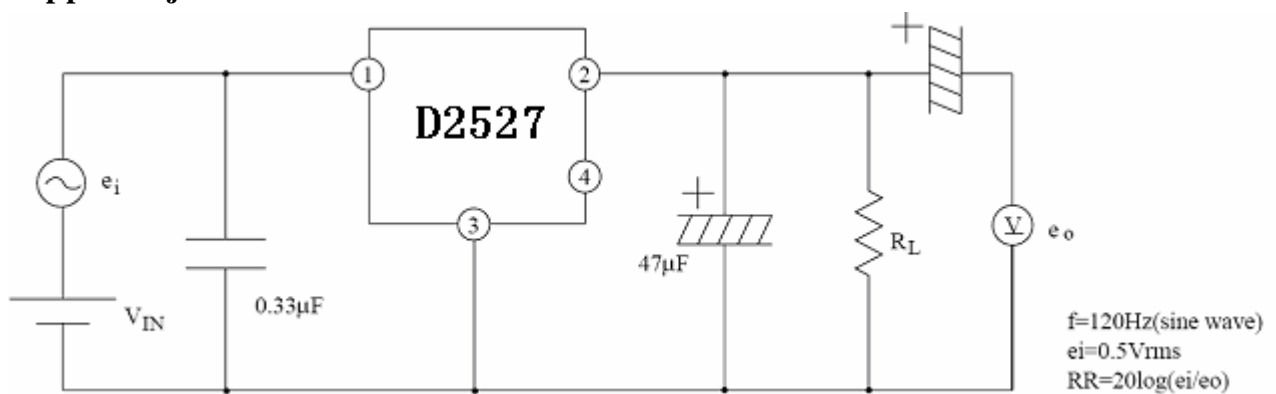
	Note1	Note2	Note3
D2527-25	V _{IN} =4.5V	V _{in} =3.5~9.5V	V _{out} =0.95V _o
D2527-33	V _{in} =5.0V	V _{in} =4.3~10.3V	
D2527-05	V _{in} =7.0V	V _{in} =6~12V	
D2527-06	V _{in} =8.0V	V _{in} =7~15V	
D2527-08	V _{in} =10V	V _{in} =9~25V	
D2527-09	V _{in} =15V	V _{in} =10~25V	
D2527-10	V _{in} =16V	V _{in} =11~26V	
D2527-12	V _{in} =18V	V _{in} =13~29V	
D2527-15	V _{in} =21V	V _{in} =16~32V	

TEST CIRCUIT

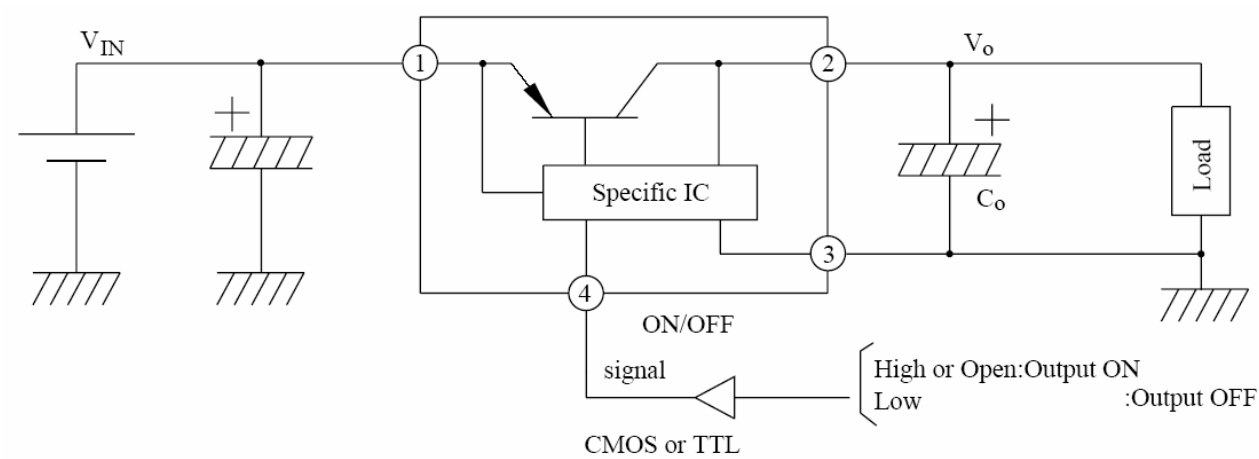
Standard Test Circuit



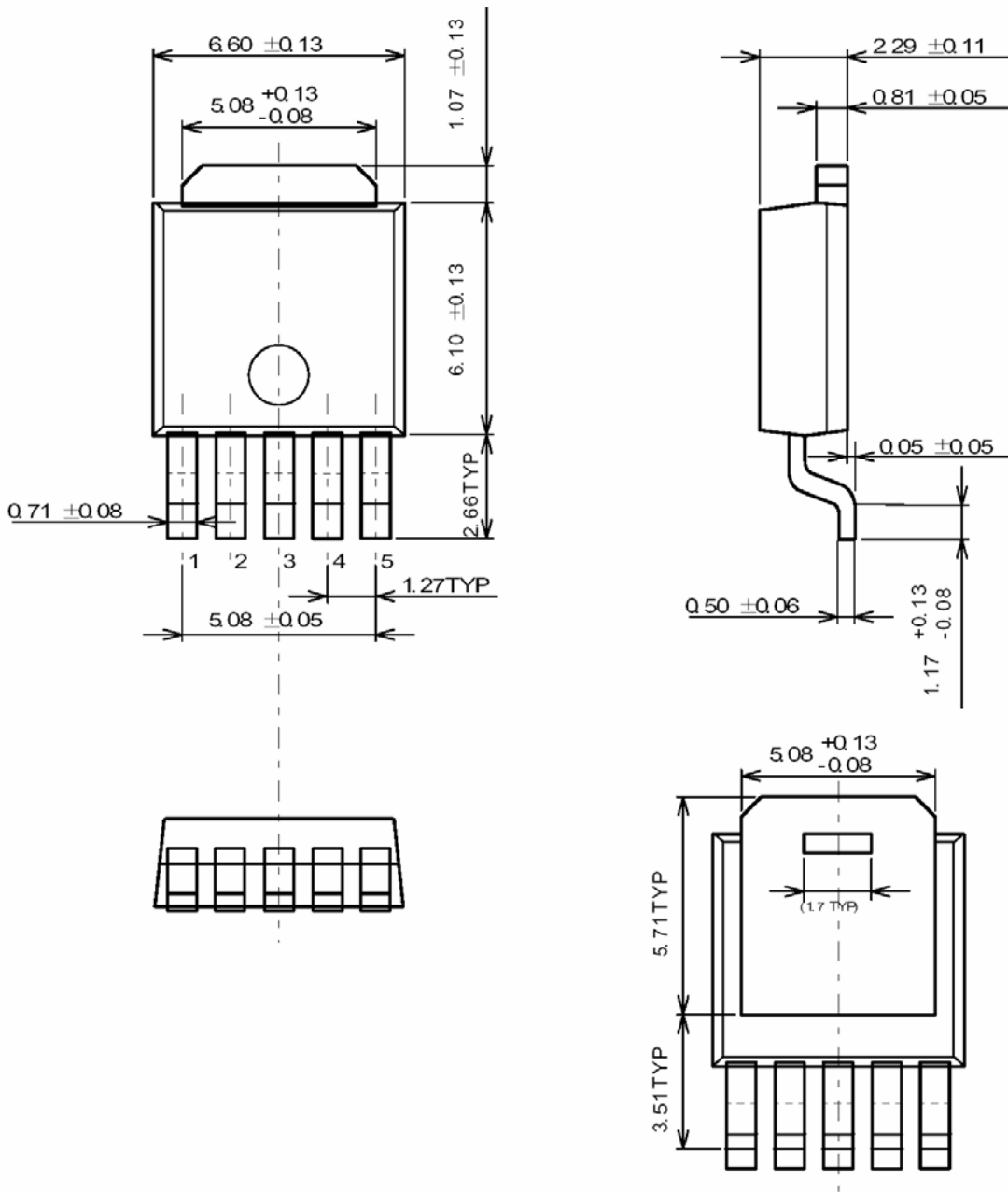
Ripple Rejection Test Circuit



APPLICATION CIRCUIT



TO-252-5L:



UNIT : mm

OUTLINE DRAWING

TO220F-4L

