

1A, 2-OUTPUT LOW DROP VOLTAGE REGULATOR

The KIA33CXXF is a 2-output low drop voltage regulator able to provide up to 1A of output current. The regulator has multi function such as over current protection, overheat protection.

FEATURES

- 1.0A Output Low Drop Voltage Regulator
- Output Voltage Accuracy : $\pm 2\%$
- Built -in Over Current Protection , Over Heat Protection Function
- Low Quiescent Current. : 1mA(Typ.)

LINE UP

ITEM	OUTPUT VOLATGE (V)		PACKAGE
	V _{OUT1}	V _{OUT2}	
* KIA33C15F	3.3	1.5	DPAK-5
* KIA33C18F	3.3	1.8	
KIA33C25F	3.3	2.5	

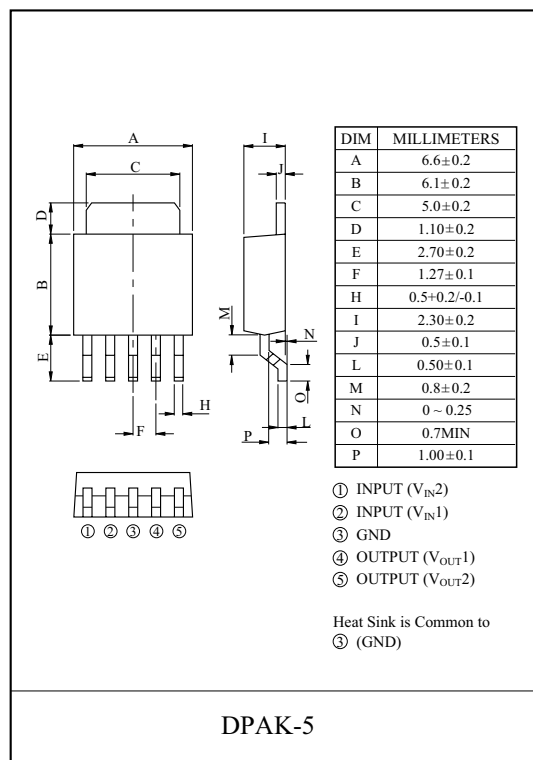
* :Under Development.

MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Input Voltage	V _{IN}	16	V
Output Current	I _{OUT}	1	A
Power Dissipation 1 (No Heatsink)	P _{D1}	1.3	W
Power Dissipation 2 (Infinite Heatsink)	P _{D2}	13	W
Operating Junction Temperature	T _{opr}	-40~125	°C
Storage Temperature	T _{stg}	-55~150	°C

ELECTRICAL CHARACTERISTICS (Unless otherwise specified, Tj=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Voltage	V _{OUT}	V _{IN} =5V, I _{OUT} =0.5A, 0A ≤ I _{OUT} ≤ 1A	3.3V	3.230	3.300	3.366	V
			2.5V	2.450	2.500	2.550	
			1.8V	1.764	1.800	1.836	
			1.5V	1.470	1.500	1.530	
Line Regulation	Reg Line	4.1 ≤ V _{IN} ≤ 16V, I _{OUT} =10mA	-	5	30	mV	
Load Regulation	Reg Load	0A ≤ I _{OUT} ≤ 1A, V _{IN} =5V	-	25	75	mV	
Quiescent Current	I _B	V _{IN} =5V, I _{OUT} =0A	-	1	1.5	mA	
Short Circuit Current Limit	I _{SC}	V _{IN} =5V, R _L =0.1 Ω	-	1.7	-	A	
Ripple Rejection	R.R	I _{OUT} =200mA, f=120Hz, V _{ripple} =1Vp-p V _{IN} =5V	50	-	-	dB	
Dropout Voltage	V _D	I _{OUT} =0.5A, V _{IN} =0.95V _{OUT}	-	-	0.5	V	



KIA33C15F~KIA33C25F

BLOCK DIAGRAM

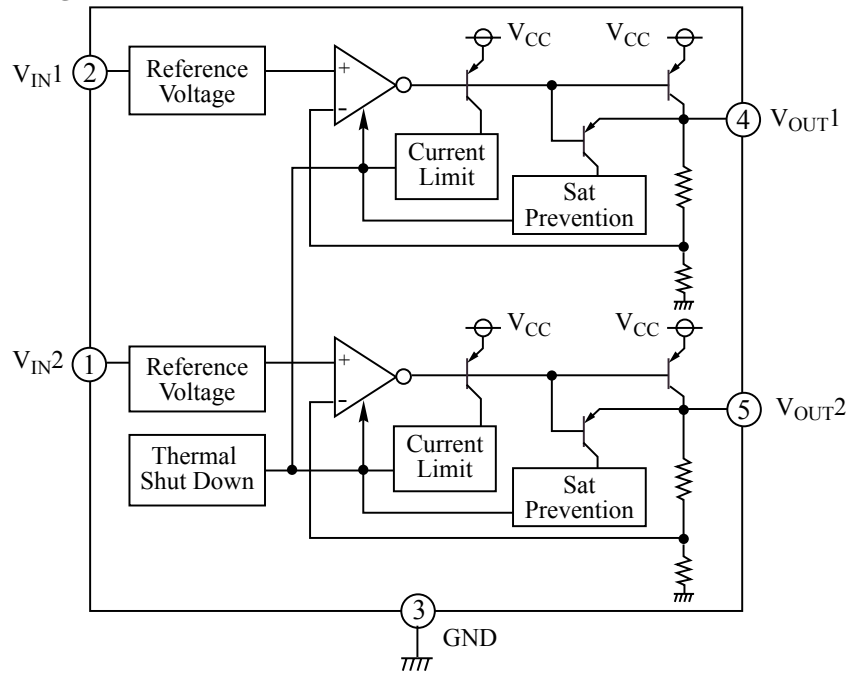


Fig.1 Application Circuit

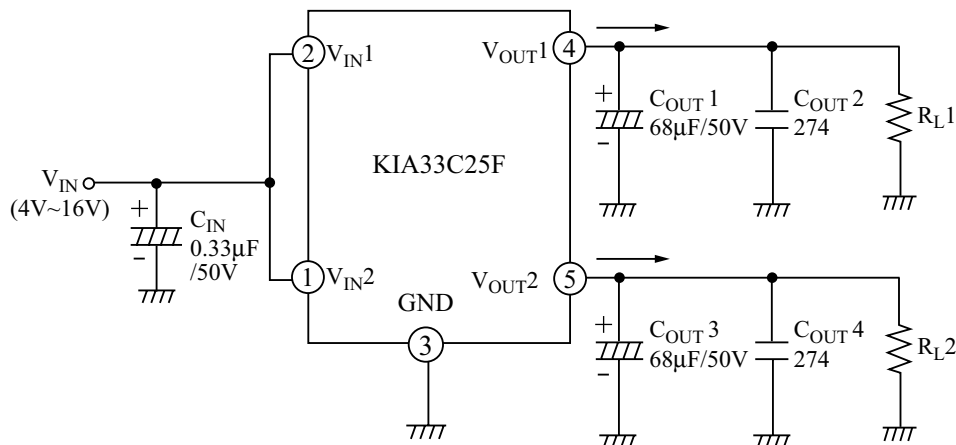
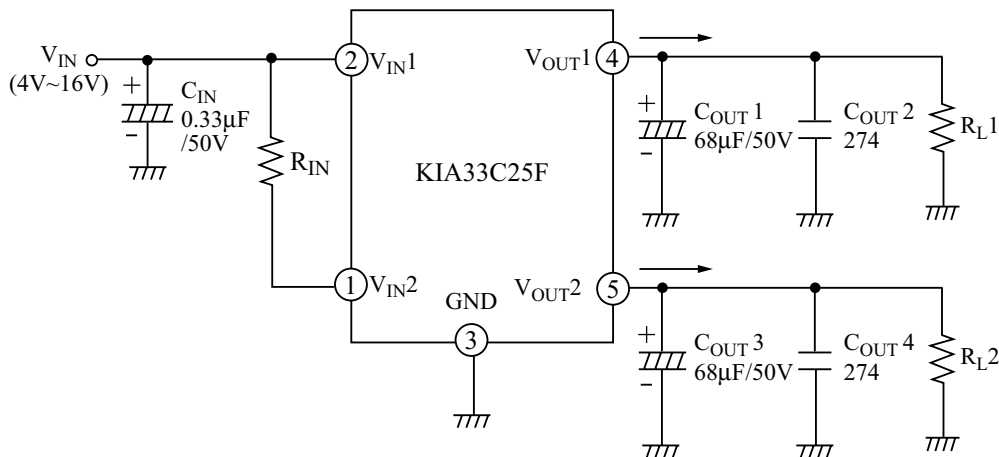


Fig.2 Application Circuit



* C_{IN} : More than 0.33 μF Required if regulator is located an appreciable distance from power supply filter. You must use to prevent from the parasitic oscillation.

*C_{OUT} : 68 μF You must use the low impedance-type(low ESR) capacitor.

KIA33C15F~KIA33C25F

Fig. 3 $V_{OUT} - V_{IN}$

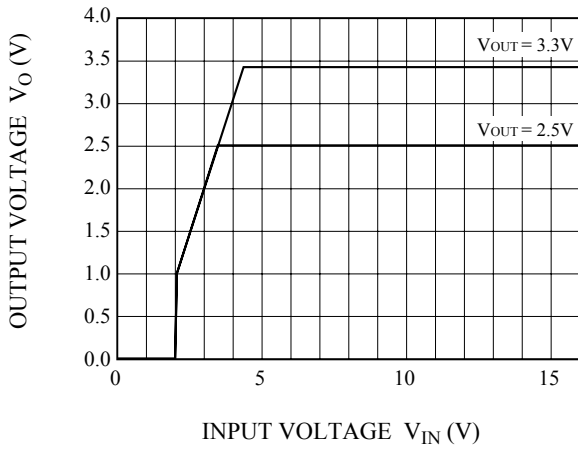


Fig. 4 $I_Q - V_{IN}$

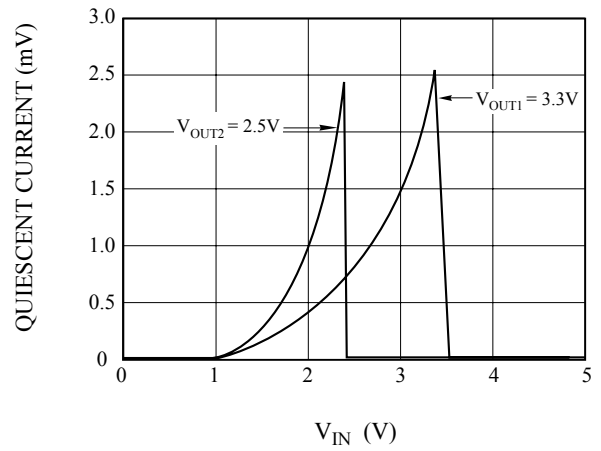


Fig. 5 $V_D - I_{OUT}$

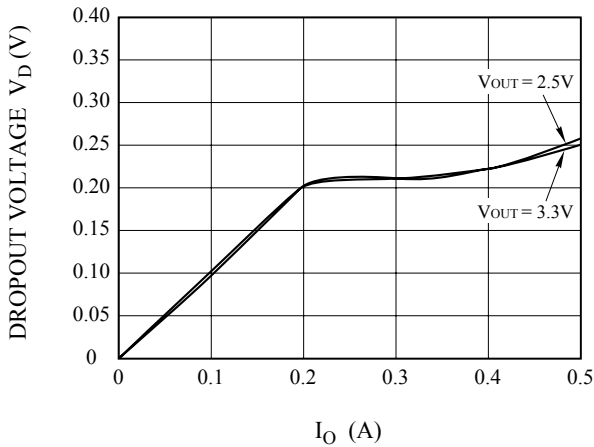


Fig. 6 R.R - f

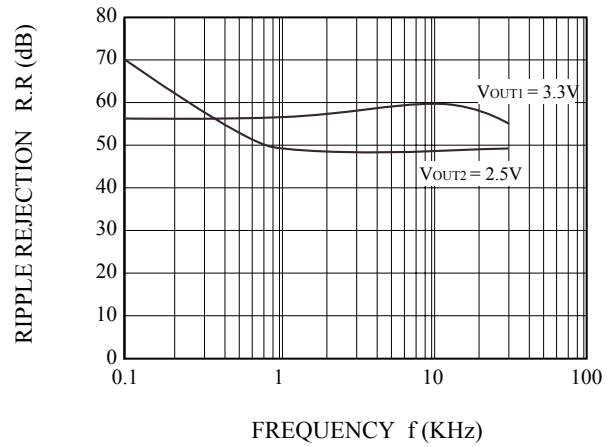


Fig. 7 $V_{OUT} - I_{OUT}$

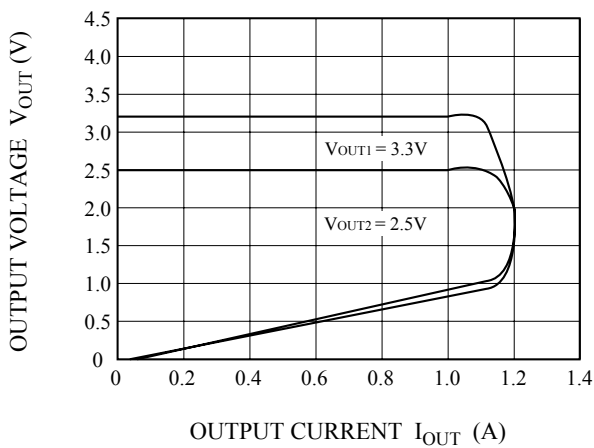


Fig. 8 $P_D - T_a$

