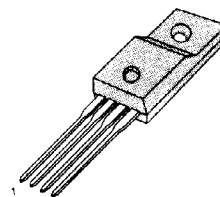


LOW DROPOUT VOLTAGE REGULATOR

The KA78R12 is a low-dropout voltage regulator suitable for various electronic equipments. It provide constant voltage power source with TO-220 4 lead full mold package.

Dropout voltage of KA78R12 is below 0.5v in full rated current(1A). This regulator has various function such as peak current protection, thermal shut down, overvoltage protection and output disable function.

TO-220F-4L



1.Vin 2.Vo 3.GND 4.Vdis

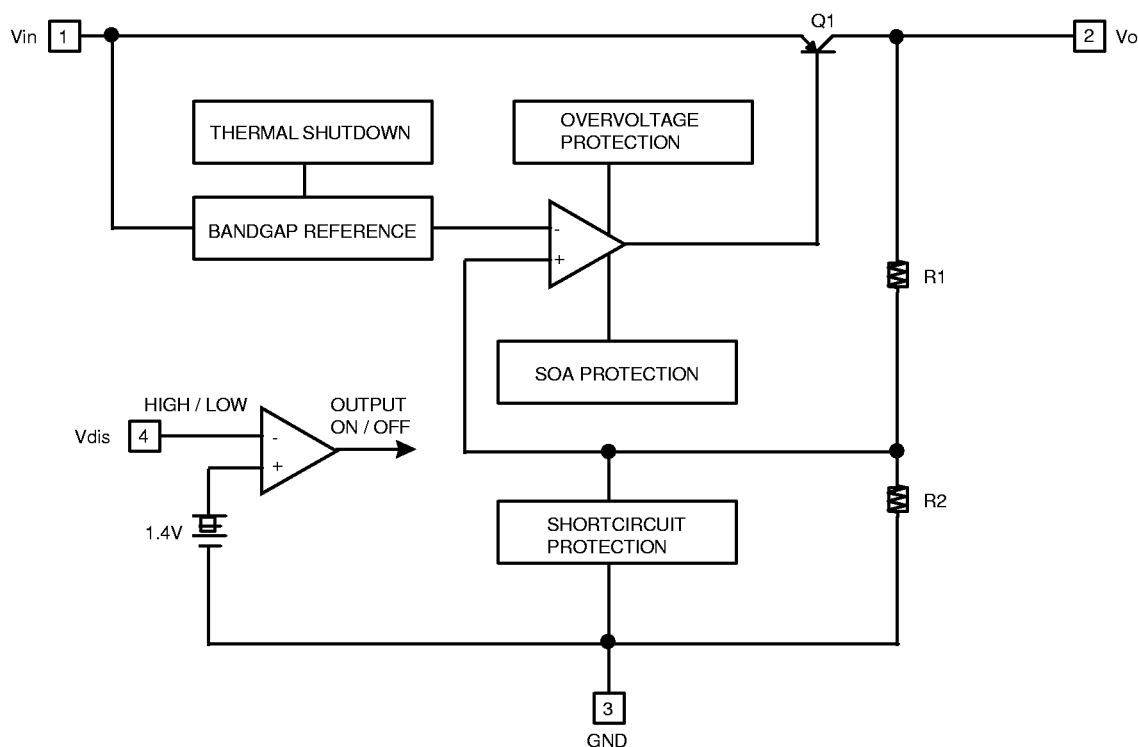
FEATURES

- 1A / 12V Output low dropout voltage regulator
- TO220 Full-Mold package (4PIN)
- Overcurrent protection, Thermal shutdown
- Overvoltage protection, Shortcircuit protection
- With output disable function

ORDERING INFORMATION

Device	Package	Operating Temperature
KA78R12	TO-220F-4L	-20°C - +80°C

BLOCK DIAGRAM



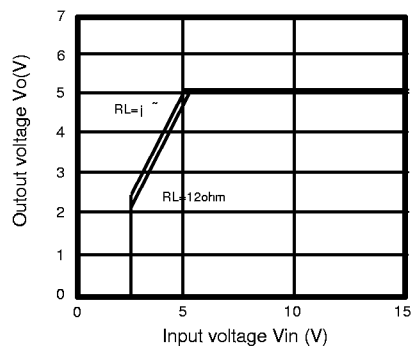
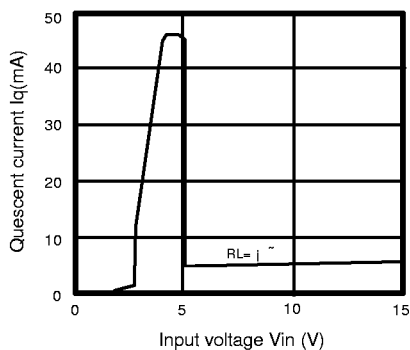
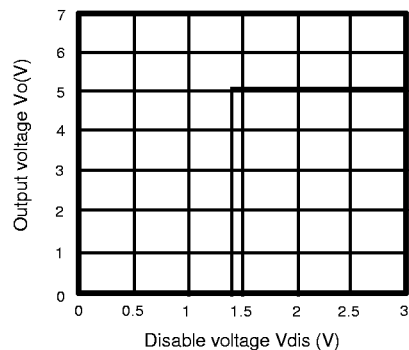
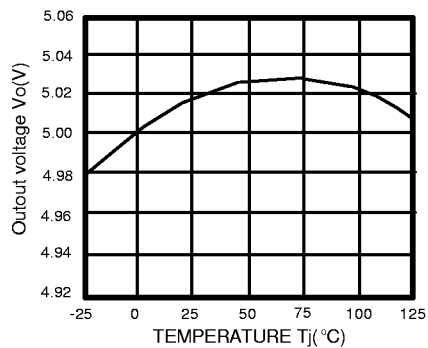
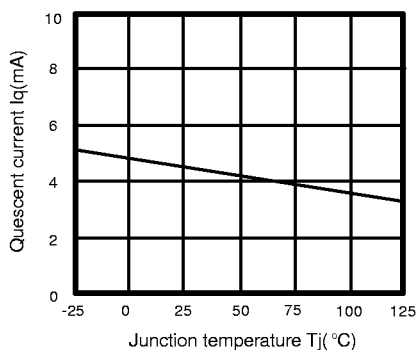
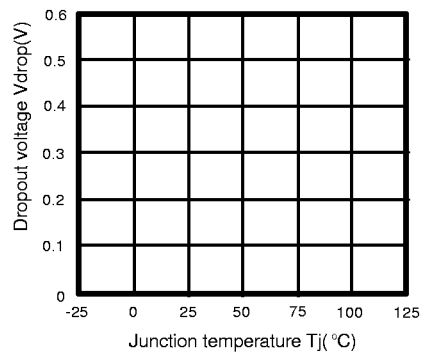
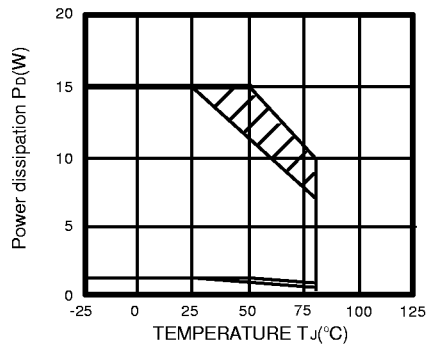
ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit	Remark
Input Voltage	V _{in}	35	V	-
Disable Voltage	V _{dis}	35	V	-
Output Current	I _o	1.0	A	-
Power Dissipation 1	P _{d1}	1.5	W	No Heatsink
Power Dissipation 2	P _{d2}	15	W	With Heatsink
Junction Temperature	T _j	150	°C	-
Operating Temperature	T _{opr}	-20 ~ 80	°C	-

ELECTRICAL CHARACTERISTICS(V_{in}=15V, I_o=0.5A, T_a=25 °C, unless otherwise specified)

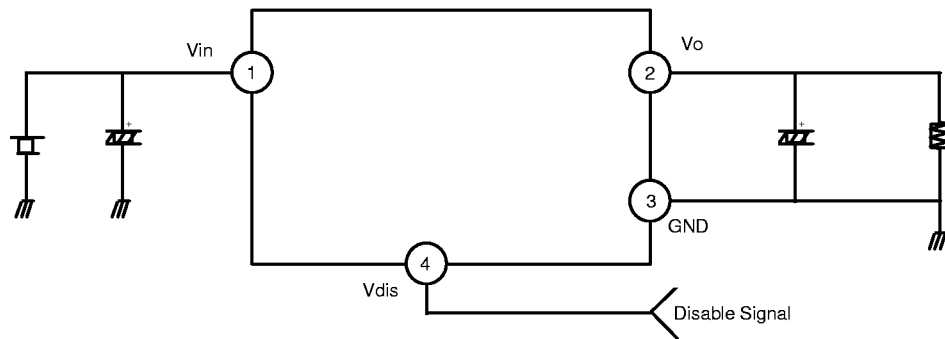
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Output Voltage	V _o	-	11.7	12	12.3	V
Load Regulation	R _{load}	5mA < I _o < 1A	-	0.1	2.0	%
Line Regulation	R _{line}	13V < V _{in} < 29V	-	0.5	2.5	%
Ripple Rejection Ratio	RR	note1	45	55	-	dB
Dropout Voltage	V _{drop}	I _o = 1A	-	-	0.5	V
Disable Voltage High	V _{disH}	Output Active	2.0	-	-	V
Disable Voltage Low	V _{disL}	Output Disabled	-	-	0.8	V
Disable Bias Current High	I _{disH}	V _{dis} = 2.7V	-	-	20	μA
Disable Bias Current Low	I _{disL}	V _{dis} = 0.4V	-	-	-0.4	mA
Quiescent Current	I _q	I _o = 0A	-	-	10	mA

*note1 : These parameters, although guaranteed, are not 100% tested in production.

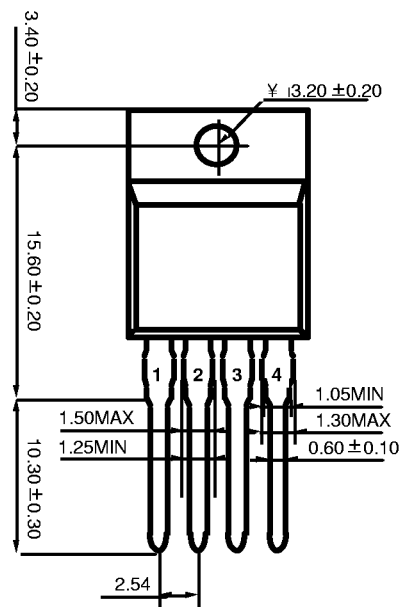
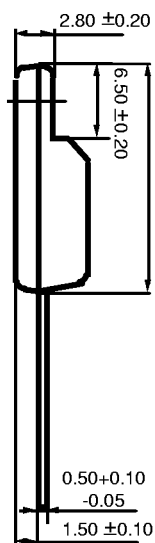
FIG.1 OUTPUT VOLTAGE
vs. INPUT VOLTAGEFIG.2 QUISCENT CURRENT
vs. INPUT VOLTAGEFIG.3 OUTPUT VOLTAGE
vs. DISABLE VOLTAGEFIG.4 OUTPUT VOLTAGE
vs. TEMPERATURE(T_j)FIG.5 QUISCENT CURRENT
vs. TEMPERATURE(T_j)FIG.6 DROPOUT VOLTAGE
vs. DISABLE VOLTAGEFIG.7 POWER DISSIPATION
vs. TEMPERATURE(T_a)

TYPICAL APPLICATION

FIG.1 APPLICATION CIRCUIT



< TO220F-4L >



* DIMENSIONS IN MILLIMETER

