

KA78R15

Low Dropout Voltage Regulator

Features

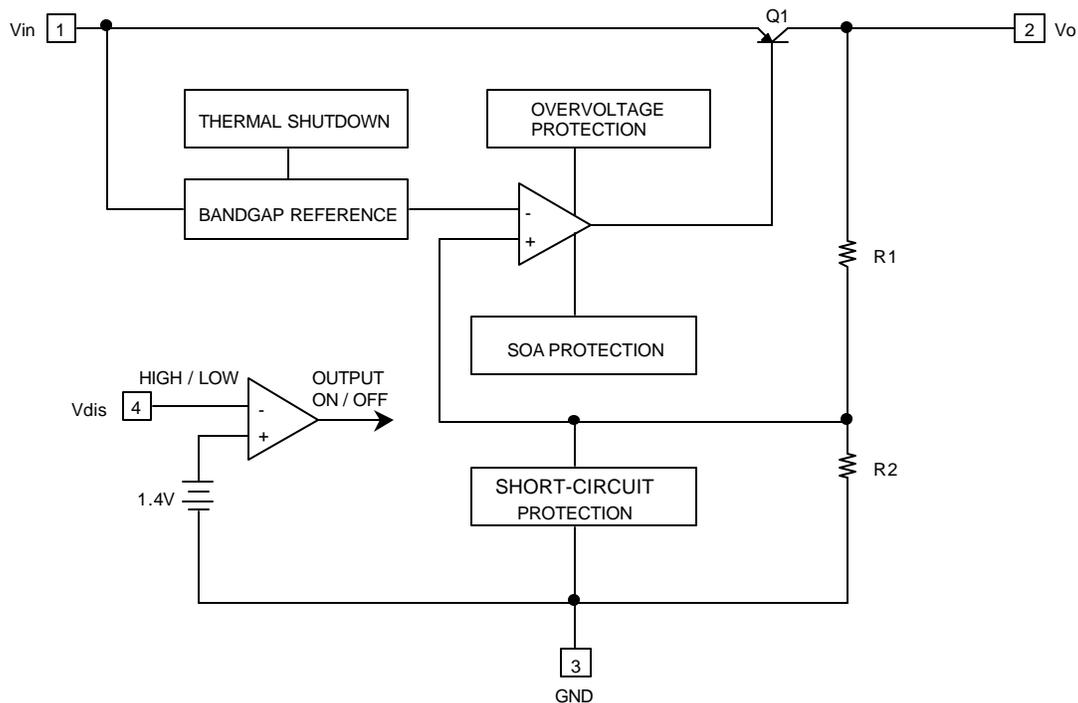
- 1A / 15V Output low dropout voltage regulator
- TO220 Full-Mold package (4Pin)
- Overcurrent protection, Thermal shutdown
- Overvoltage protection, Short-Circuit protection
- With output disable function

Description

The KA78R15 is a low-dropout voltage regulator suitable for various electronic equipments. It provides constant voltage power source with TO-220 4 lead full mold package. Dropout voltage of KA78R15 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.



Internal Block Diagram



Absolute Maximum Ratings

Parameter	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} = 20V, I_o = 0.5A, T_a = 25°C, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	V _o	-	14.6	15	15.4	V
Load Regulation	R _{load}	5mA < I _o < 1A	-	0.1	2.0	%
Line Regulation	R _{line}	16V < V _{in} < 30V	-	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

Note:

1. These parameters, although guaranteed, are not 100% tested in production.