78M15

Three-terminalpositive voltage regulator

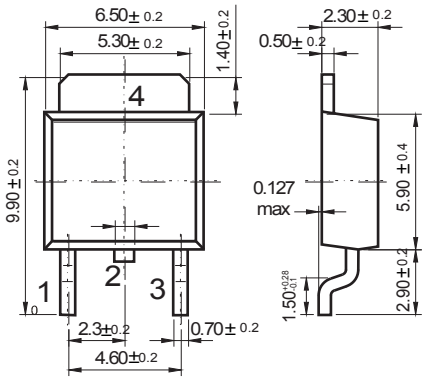
FEATURE

- Low gate charge
- Low C_{iss}
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability

Maximum output current
I_{OM}: 0.5 A
Output voltage
V_O: 15V
Continuous total dissipation
P_D: 1.25 W (T_a= 25 ℃)

TO-252

Unit: mm



Dimensions in inches and (millimeters)

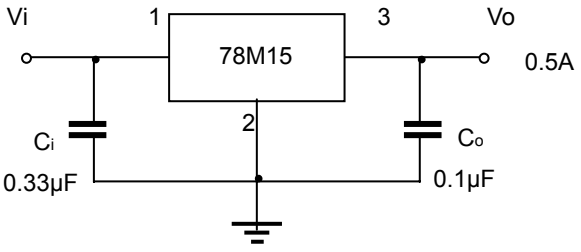
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	0-+125	℃
Storage Temperature Range	T_{STG}	-65-+150	℃

ELECTRICAL CHARACTERISTICS (V_i=23V,Io=350mA, C_i=0.33μF,C_o=0.1μF, unless otherwise specified)

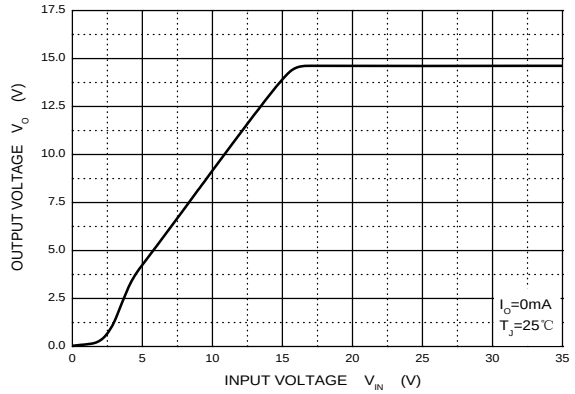
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output Voltage	Vo	V_i=23V,Io=350mA	25℃	14.4	15	15.6	V
		17.5≤V_i≤30V, Io=5mA~350mA Po≤15W	0-125℃	14.25	15	15.75	V
Load Regulation	ΔVo	Io=5mA~500mA	25℃			300	mV
		Io=5mA~200mA	25℃			150	mV
Line Regulation	ΔVo	17.5V≤V_i≤30V, Io=200mA	25℃			100	mV
		20V≤V_i≤26V, Io=200mA	25℃			50	mV
Quiescent Current	Iq	V_i=23V,Io=350mA	25℃			6	mA
Quiescent Current Change	ΔIq	17.5V≤V_i≤30V, Io=200mA	0-125℃			0.8	mA
	ΔIq	V_i=23V, Io=5mA~350mA	0-125℃			0.5	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		90		μV
Ripple Rejection	RR	18.5≤V_i≤28.5V,f=120Hz,Io=300mA	0-125℃	54			dB
Dropout Voltage	Vd		25℃		2		V

TYPICAL APPLICATION

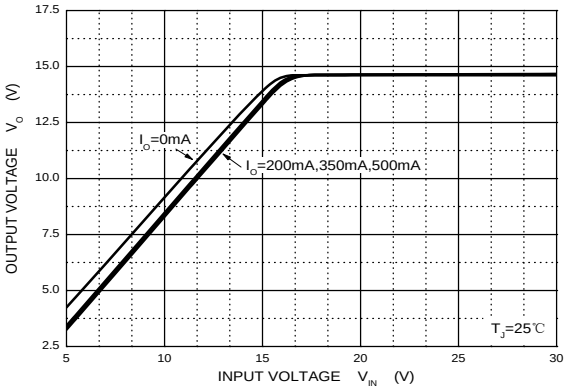


RATING AND CHARACTERISTIC CURVES (78M15)

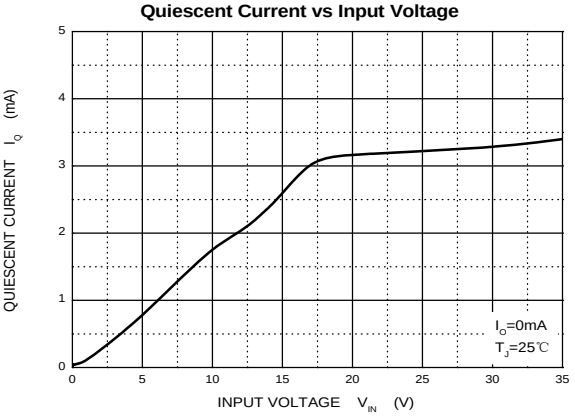
Output Characteristics



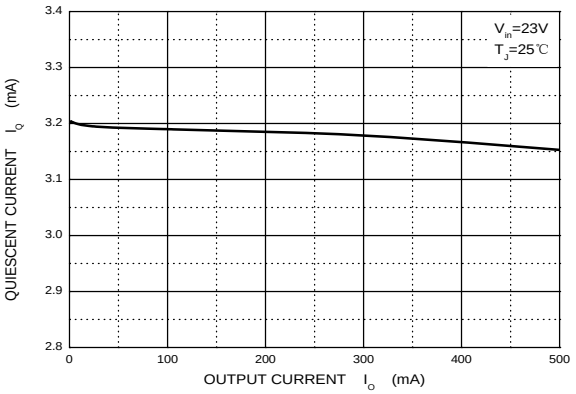
Dropout Characteristics



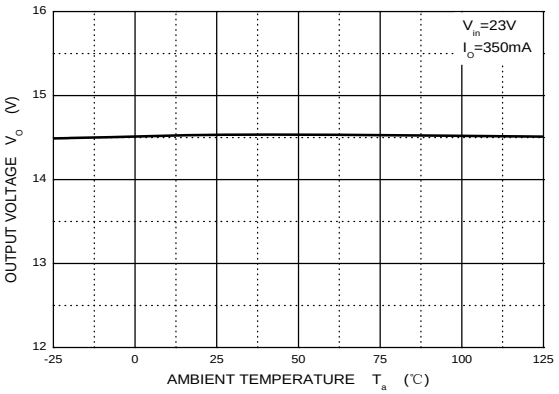
Quiescent Current vs Input Voltage



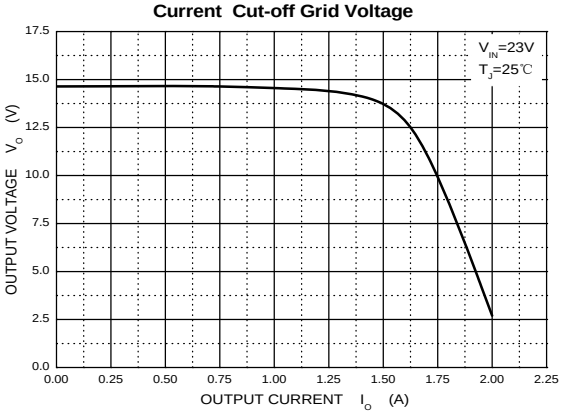
Quiescent Current vs Output Current



Output Voltage vs Ambient Temperature



Current Cut-off Grid Voltage



Power Derating Curve