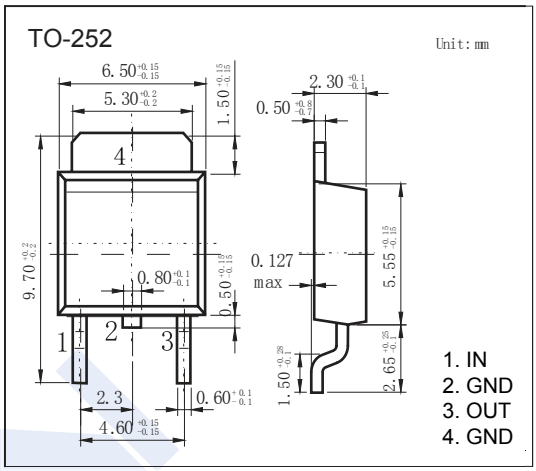
Three Terminal Positive Voltage Regulator

78M06



■ Features

- Maximum Output Current I_O: 500mA
- Output Voltage V_O: 6V
- Continuous Total Dissipation PD: 1.25 W (T_a= 25 ℃)

■ Absolute Maximum Ratings Over Operating Temperature Range(unless otherwise noted)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Maximum Output Current	I_O	0.5	A
Thermal Resistance, Junction-to-Ambient	R_{thJA}	80	℃/W
Operating Junction Temperature Range	T_{OPR}	-25 to 125	℃
Storage Temperature Range	T_{stg}	-65 to 150	

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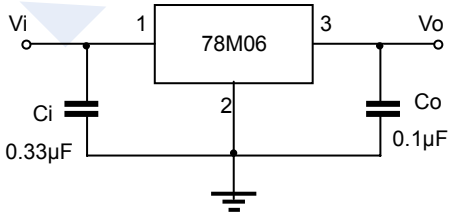
■ Electrical Characteristics at Specified Virtual Junction Temperature

(Vi=11V, Io=350mA, Ci=0.33μF,Co=0.1μF,unless otherwise noted)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Output Voltage	V_O		25℃	5.75	6	6.25	V
		8V≤Vi≤21V, Io= 5.0mA~350mA	-25 to 125℃	5.7	6	6.3	
Load Regulation	$\triangle V_O$	Io= 5.0mA~500mA	25℃			120	mV
		Io= 5.0mA~200mA	25℃			60	
Line Regulation	$\triangle V_O$	8V≤Vi≤25V, Io=200mA	25℃			100	
		9V≤Vi≤25V, Io=200mA	25℃			50	
Quiescent Current	I_q		25℃			6	mA
Quiescent Current Change	$\triangle I_q$	9V≤Vi≤25V, Io=200mA	-25 to 125℃			0.8	
		5mA≤Io≤350mA	-25 to 125℃			0.5	
Output Noise Voltage	V_N	10Hz≤F≤100kHz	25℃		45		μV/Vo
Ripple Rejection	R_R	9V≤Vi≤19V, F=120Hz, Io=300mA	-25 to 125℃	59			dB
Dropout Voltage	V_d	Io=350mA	25℃		2		V
Short Circuit Current Limit	Isc	Vi=11V	25℃		270		mA
Peak Current	Ipk		25℃		0.5		A

* Pulse test.

■ Typical Application



Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

■ Marking

Marking	78M06 K****

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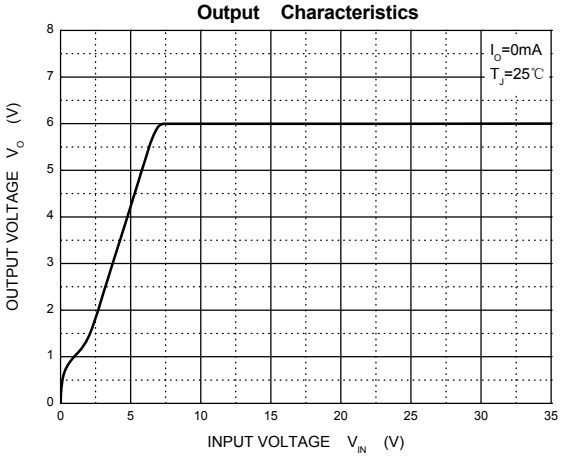
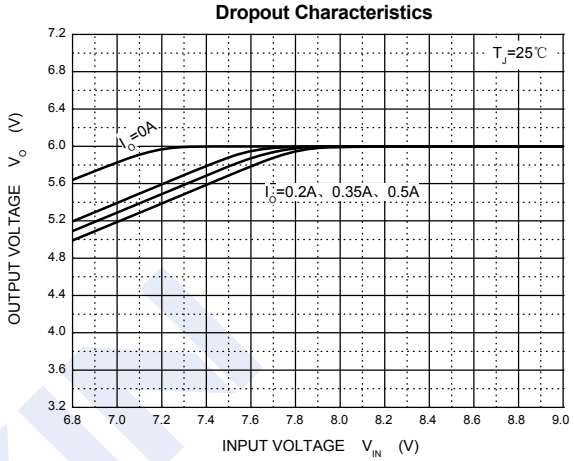
■ Typical Characterisitics

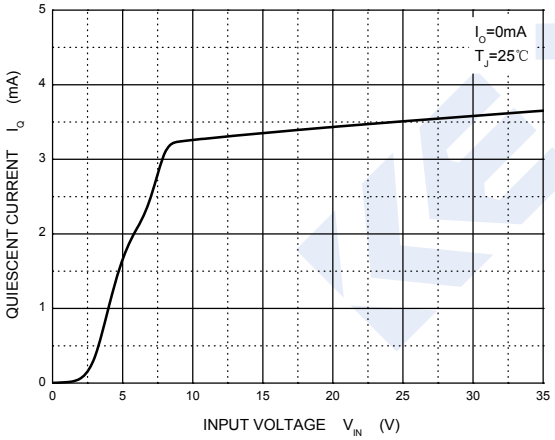
Output Characteristics



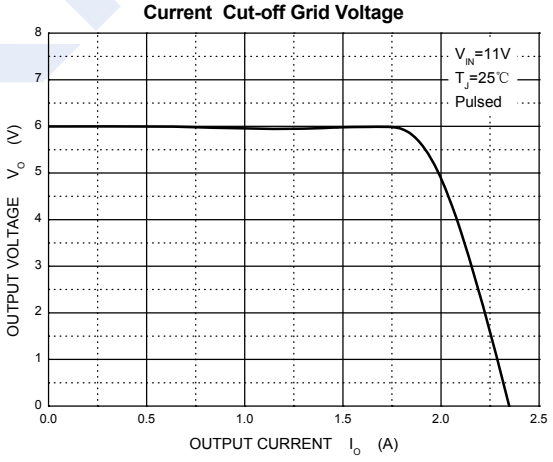
Dropout Characteristics



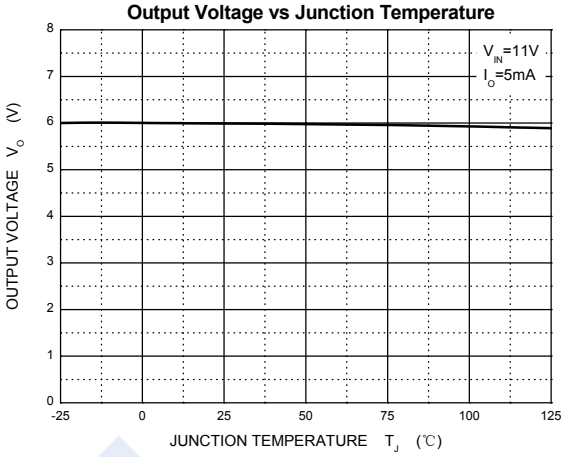
Quiescent Current



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve