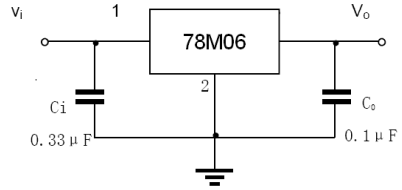
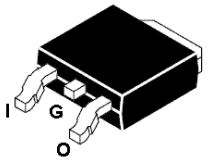
78M06

Three-terminal positive voltage regulator

FEATURES

- Output current in excess of 0.5A
- No extemal components
- Internal thermal overload protection
- Intermal short circuit current-limiting
- Output transistor safe-area compensation





TO-252

APPLICATIONS

- Three-terminal positive voltage regulator

Ordering Information

Part Number	Package	Shipping	Marking Code
78M06	TO-252	80pcs / Tube or 2500pcs / Tape & Reel	78M06

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Units
V_I	Input voltage	35	V
P_D	Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance Junction-Air	80	℃/W
T_J	Operating junction temperature	-40 to 125	℃
T_{STG}	Storage temperature range	-65 to +150	℃

ELECTRICAL CHARACTERISTICS

(V_{IN}=11V,I_O=350mA,C_{IN}=0.33μF,C_O=0.1μf,unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_O	I_O=350mA,V_{IN}=11V 5mA≤I_O≤350mA 8V≤V_{IN}≤21V	5.75 5.7 5.7	6 6 6	6.25 6.3 6.3	V
Load regulation(Note1)	△Reg_{load}	5mA≤I_O≤500mA 5mA≤I_O≤200mA			120 60	mV
Line regulation(Note1)	△Reg_{line}	8V≤V_{IN}≤25V,I_O=200mA 9V≤V_{IN}≤25V, I_O=200mA			100 50	mV
Quiescent Current	I_Q	V_{IN}=11V,I_O=350mA		4.0	6.0	mA
Quiescent Current Change	△I_Q	5mA≤I_O≤350mA 9V≤V_{IN}≤25V,I_O=200mA			0.5 0.8	mA
Output Voltage Driff	△V/△T	I_O=5mA, T_J=0 to+125℃		-0.5		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz		45		μV/V_O
Ripple Rejection	RR	f=120Hz,I_O=300mA, V_I=11.5V to 21.5V	59			dB
Dropout Voltage	V_D	T_A=+25℃,I_O=500mA		2.0		V
Short Circuit Current	I_{SC}	V_I=35V,T_J=25℃		300		mA
Peak Current	I_{PK}	T_J=25℃		700		mA

Note: 1. Load and line regulation are specified at constant, junction temperature. Change in V_O due to Heating effects must be taken into account separately. Pulse testing with low duty is used

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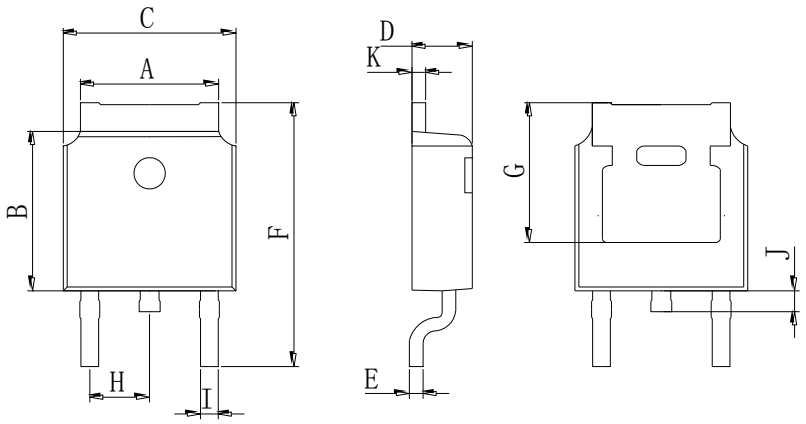
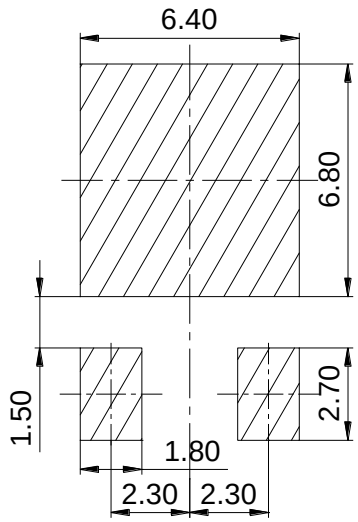
Three-terminal positive voltage regulator

PACKAGE OUTLINE



TO-252		
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	9.71	10.31
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	0.50	0.7
K	0.40	0.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm