

Three-terminal positive voltage regulator

FEATURES:

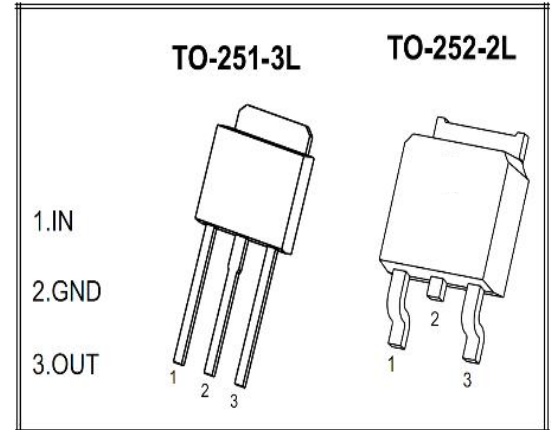
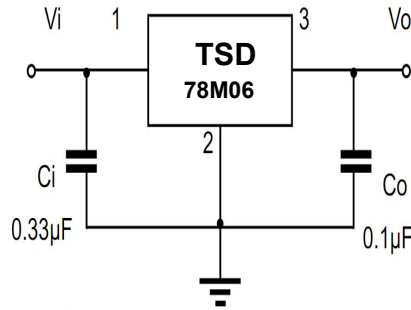
- ※ Maximum output current
IOM: 1A
- ※ Output voltage
VO: 6V
- ※ Continuous total dissipation
PD: 1.25W

MARKING:

TSD78M06 TSDD / U ****

TSD→logo (D→252) / (U→251) ****→Date

TYPICAL APPLICATION:



Absolute Maximum ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance From Junction to air	$R_{\theta JA}$	80	°C/W
Operating Junction Temperature Range	TOPR	-25~+125	°C
Storage Temperature Range	TSTG	-55~+150	°C

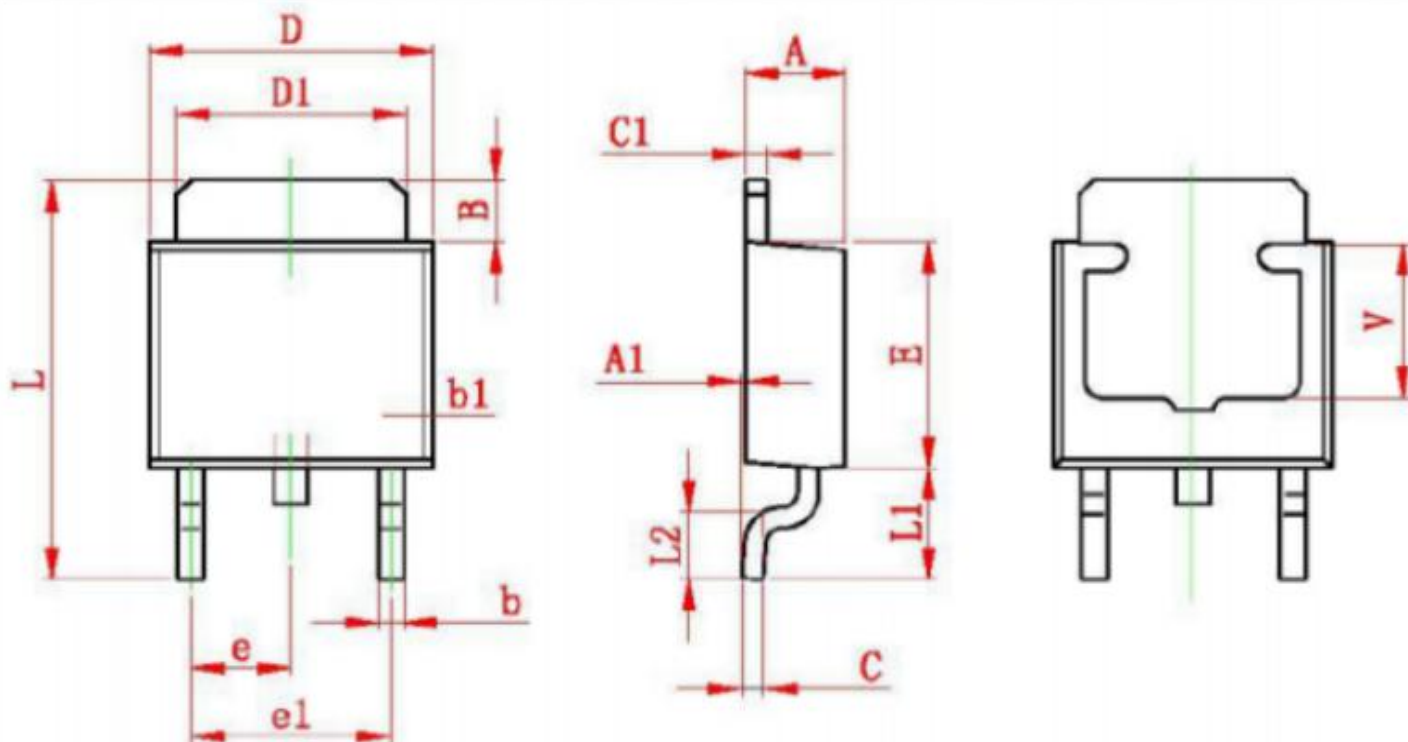
Electrical Characteristics At Specified Virtual Junction Temperature ($V_i=11V$, $I_o=350mA$, $C_i=0.33\mu F$, $C_o=0.1\mu F$. Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Output voltage	V_O	25°C	5.75	6	6.25	V
		8V≤ V_i ≤21V, $I_o=5mA-350mA$, -25~+125	5.7	6	6.3	V
Load Regulation	ΔV_O	$I_o=5mA-0.5A$, $V_i=11V$, 25°C		18	120	mV
		$I_o=5mA-200mA$, $V_i=11V$, 25°C		10	60	mV
Line Regulation	ΔV_O	8V≤ V_i ≤25V, $I_o=200mA$, 25°C		5	100	mV
		9V≤ V_i ≤25V, $I_o=200mA$, 25°C		1.5	50	mV
Quiescent Current	I_q	25°C		4.3	6	mA
Quiescent Current Change	ΔI_q	9V≤ V_i ≤25V, $I_o=200mA$, -25~+125			0.8	mA
	ΔI_q	5mA≤ I_o ≤350mA, -25~+125			0.5	mA
Output Noise Voltage	V_N	10Hz≤ f ≤100KHz, 25°C		45	200	μV/ V_o
Ripple Rejection	R_r	9V≤ V_i ≤19V, $f=120Hz$, $I_o=300mA$, -25~+125	59	80		dB
Dropout Voltage	V_d	$I_o=350mA$, 25°C		2	2.5	V
Short Circuit Current	I_{sc}	$V_i=11V$, 25°C		300		mA
Peak Current	I_{PK}	25°C		0.5		A

Note :

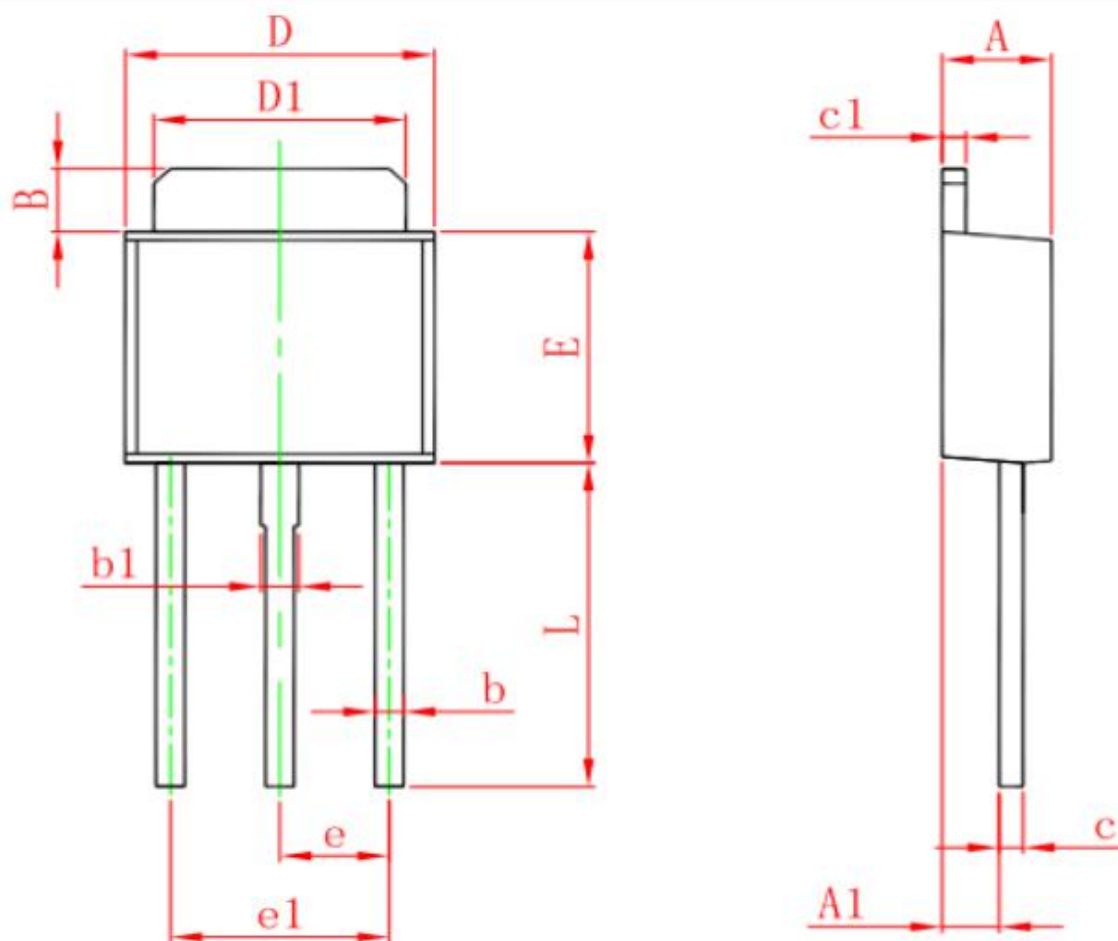
Bypass Capacitors are Recommended For Optimum Stability and Transient Response and Should be located as Close as Possible to the Regulators

Package Dimensions:



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP		0.091 TYP	
e1	4.500	4.700	0.177	0.185
L	9.500	9.900	0.374	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
V	3.80 REF		0.150 REF	

Package Dimensions:



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	1.050	1.350	0.042	0.054
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311