TO-252-2L Plastic-Encapsulate Voltage Regulator

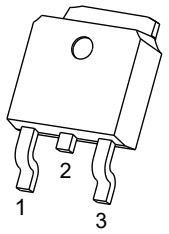
HALOGEN FREE

Three-terminal negative voltage regulator

FEATURES

- Maximum output current
  I_{OM}: 1.5 A
- Output voltage
  V_O: 15V
- Continuous total dissipation
  P_D: 1.25 W (T_a = 25 ℃)

TO-252-2L



1.IN

2.GND

3.OUT

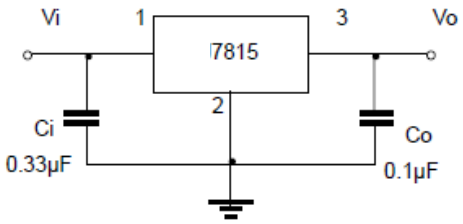
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V_i=23V, Io=500mA,,0℃<T_j<125℃,C_i=0.33μF,Co=0.1μF, unless otherwise specified)

* Pulse test.

TYPICAL APPLICATION

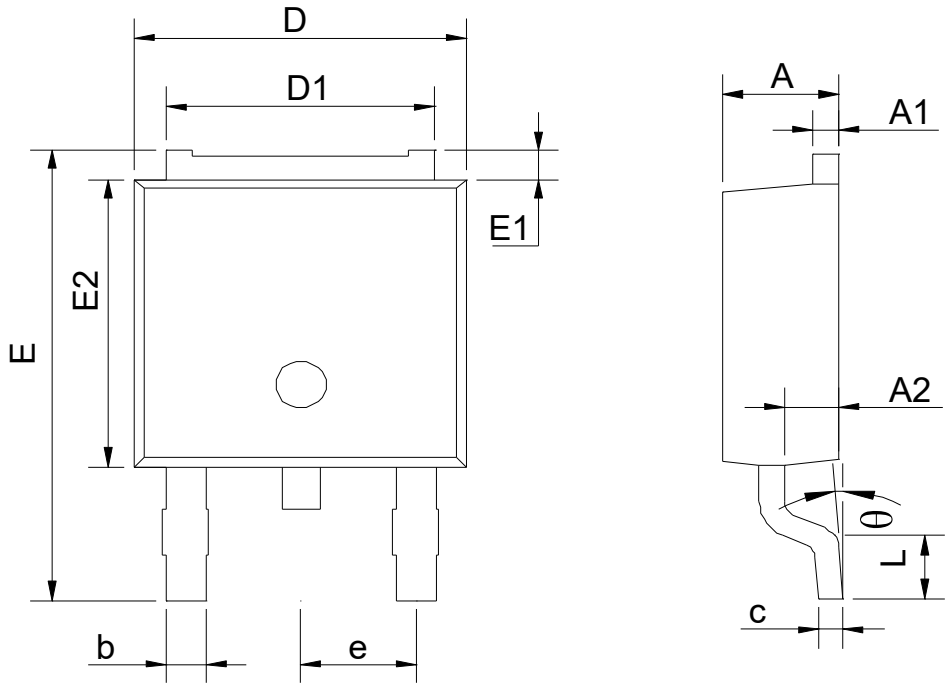


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V_i=23V, Io=500mA,,0℃<T_j<125℃,C_i=0.33μF,Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo	T_A= 25˚C		14.40	15	15.60	V
		5.0mA≤Io≤1.0A, Po≤15W Vi=17.7V~30V		14.25	15	15.75	
Line regulation	ΔV_O	Vi=17.9V~30V			10	145	mV
		Vi=20V~26V			5	145	
		T_A= 25˚C	Vi=17.5V ~30V		11	145	
			Vi=20V~ 26V		3	75	
Load regulation	ΔV_O	T_A= 25˚C,	Io=5mA~ 1.5A		12	145	mV
			Io=250~ 750mA		5	75	
Quiescent current	I_Q	T_A= 25˚C			5	8	mA
Quiescent current change	ΔI_Q	Io=5mA~1.0A				0.5	mA
		Vi=17.5V~30V,				0.8	
		Vi=17.5V~30V, T_A= 25˚C				0.8	
Output voltage drift	ΔVo/ΔT	Io=5mA			-1		mV/˚C
Output noise voltage	V_N	f=10Hz~100kHz, T_A= 25˚C			90		uV
Ripple rejection	$\Delta V_I/\Delta V_O$	f=120Hz, Vi=18.5V~28.5V			70		dB
Dropout voltage	V_{DROP}	Io=1A, T_A= 25˚C			2		V
Output resistance	Ro	f=1kHz			19		mΩ
Short circuit current	I_{SC}	Vi=35V, T_A= 25˚C			10		mA
Peak current	I_{PK}	T_A= 25˚C			1.8		A

TO-252-2L Package Outline Dimensions



SYMBOL	mm	
	min	max
A	2.20	2.40
A1	0.45	0.55
A2	0.97	1.07
b	0.75	0.84
c	0.49	0.57
D	6.50	6.70
D1	5.34REF	
E	9.62	9.82
E1	0.59	0.69
E2	6.10	6.30
e	2.29BSC	
L	1.40	1.60
θ	0	8°