TIGER ELECTRONIC CO.,LTD

Product specification

3-Terminal 1A Negative Voltage Regulator — LM7910J

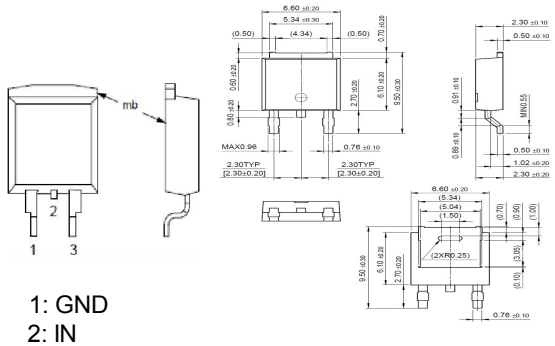
RoHS COMPLIANT

GENERAL DESCRIPTION

The LM7910J series of three-terminal negative regulators are available in TO-252 package and with several fixed output voltages, making them useful in a wide range of applications. Each type employs internal current limiting, thermal shutdown and safe operating area protection, making it essentially indestructible.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	Symbol	Typ	Unit
Input Voltage	V_I	-35	V
Output Voltage	V_O	-10.0	V
Peak Current	I_{PK}	-2.2	A
Operating Temperature Range	T_{OPR}	0~125	°C
Storage Temperature Range	T_{STG}	-65~150	°C



1: GND
2: IN
3: OUT

TO-252

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

(Refer to test circuit, Io = 500mA, Vi = -16V, Ci= 2.2uF, Co=1.0uF unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	Tj = 25℃ V_I = -13V ~ -25V I_O = 5.0mA~1.0A	-9.7	-10.0	-10.3	V
Line Regulation	$\triangle V_o$	Tj = 25℃, Vi =-13V ~ -25V	—	—	-200	mV
		Tj = 25℃, V_I = -13V ~ -20V	—	—	-100	
Load Regulation	$\triangle V_o$	Tj = 25℃, I_O = 5.0mA ~1.0A	—	—	-200	mV
		Tj = 25℃ I_O = 250mA ~ 750mA	—	—	-100	
Quiescent Current	I_Q	T_J =+25 °C	—	—	-8.0	mA
Quiescent Current Change	$\triangle IQ$	Io = 5.0mA ~ 1.0A			-0.5	mA
		Tj = 25℃, Vi = -13V ~ -25V			-1.0	mA
Output voltage drift	$\triangle Vo/\triangle T$	Io = 5.0mA		-0.5		mV/℃
Ripple Rejection	RR	f = 120Hz, V_O = -13V to -23V	56	80	—	dB
Dropout Voltage	V_{Drop}	I_O = 1.0A, T_J =+25 °C	—	-2	—	V
Output Resistance	R_O	f = 1KHz	—	0.017	—	Ω
Short Circuit Current	I_{SC}	V_I = -35V, T_A = +25 °C	—	-300	—	mA
Peak Current	I_{PK}	T_J = +25 °C	—	—	-2.2	A