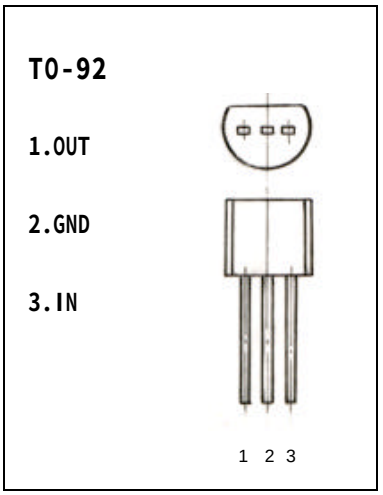
SHENZHEN HAOCHANG SEMICONDUCTOR CO.,LTD.

TO-92 Encapsulate Three-terminal Voltage Regulator

78L12 Three-terminal positive voltage regulator



FEATURES

Maximum Output current

$I_{OM:}$ 0.1A

Output voltage

V_o: 12 V

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

Parameter	Symbol	Value	Unlts
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	0—+125	℃
Storage Temperature Range	T_{STG}	-55—+150	℃

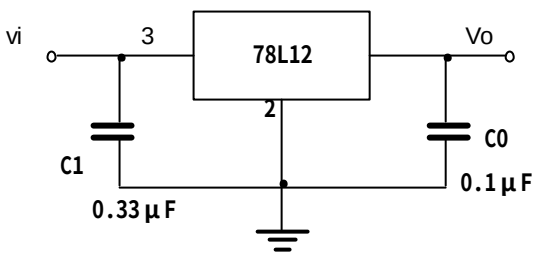
UTC78L05 ELECTRICAL CHARACTERISTICS

(VI=19V,Io=40mA,0℃<Tj<125℃,C1=0.33μF,Co=0.1μF, unless otherwise specified)

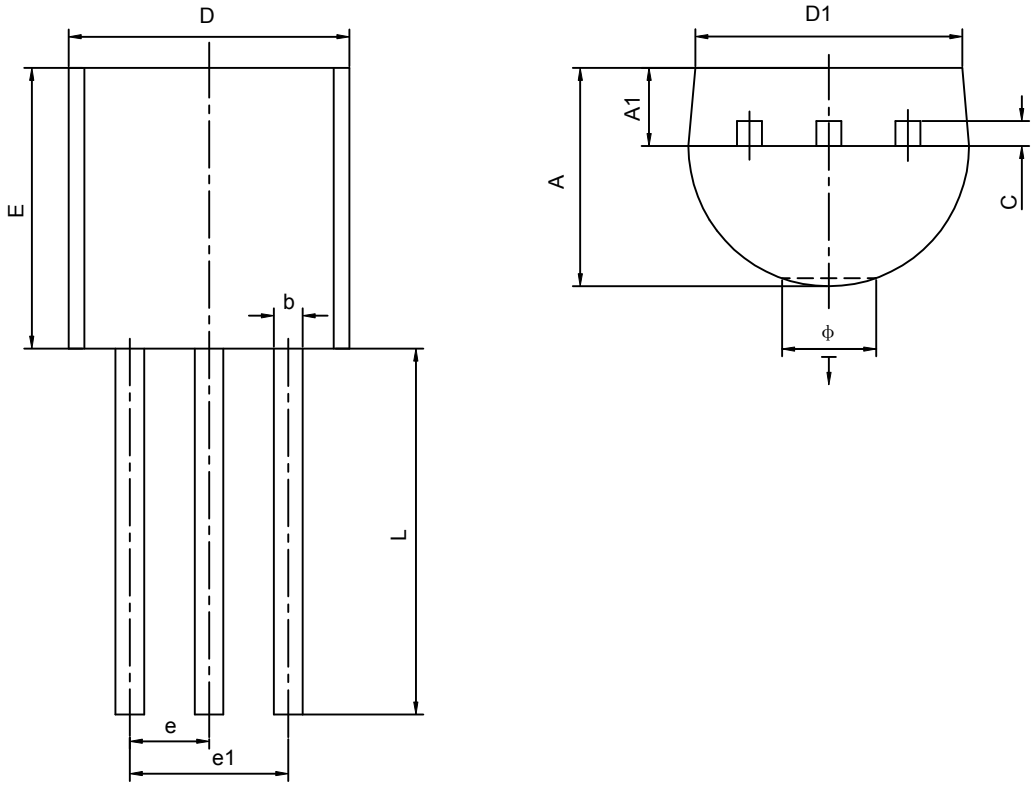
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	Vo	Tj=25℃	11.5	12	12.5	V
		14.5V≤V_I≤27V, Io=1mA-40mA	11.4	12	12.6	V
		14.5V≤V_I≤27V, Io=1mA-70mA	11.4	12	12.6	V (note)
Load Regulation	△Vo	Tj=25℃, Io=1mA-100mA		22	100	mV
		Tj=25℃, Io=1mA-40mA		13	50	mV
Line regulation	△Vo	14.5V≤V_I≤27V, Tj=25℃		55	250	mV
		16V≤V_I≤27V, Tj=25℃		49	200	mV
Quiescent Current	Iq			4.3	6.5	mA
Quiescent Current Change	△Iq	16V≤V_I≤27V			1.5	mA
	△Iq	1mA≤I_o≤40mA			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz		70		uV
Ripple Rejection	RR	15V≤V_I≤25V,f=120Hz,Tj=25℃	37	42		dB
Dropout Voltage	Vd	Tj=25℃		1.7		V

TYPICAL APPLICATION

TC



TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
⊤	0.000	0.380	0.000	0.015