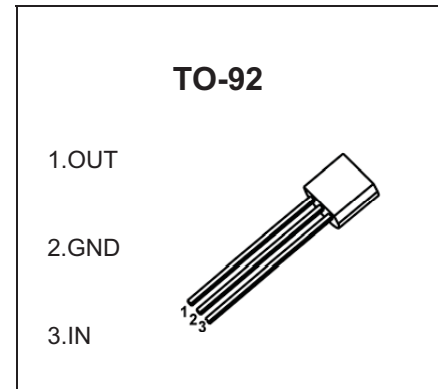


TO-92 Plastic-Encapsulate Voltage Regulator

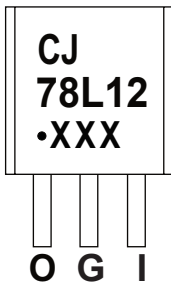
CJ78L12 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 I_{OM} : 0.1A
- Output voltage
 V_O : 12V
- Continuous total dissipation
 P_D : 0.625 W ($T_a=25\text{ }^\circ\text{C}$)



MARKING



CJ78L12=Device code
Solid dot=Green molding compound device,
if none,the normal device
XXX=Code

ORDERING INFORMATION

Part NumberK	Package	Packing Method	Pack Quantity
CJ78L12	TO-92	Bulk	1000pcs/Bag
CJ78L12-TA	TO-92	Tape	2000pcs/Box

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	$R_{\theta JA}$	166.7	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

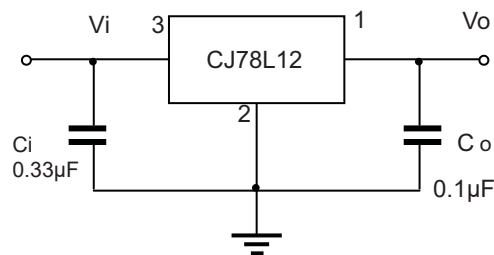
ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified ($V_i=19\text{V}$, $I_o=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_J=25\text{ }^\circ\text{C}$	11.64	12	12.36	V
		$14\text{V}\leq V_i\leq 27\text{V}$, $I_o=1\text{mA}-40\text{mA}$	11.4	12	12.6	V
		$I_o=1\text{mA}-70\text{mA}$	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}$, $T_J=25\text{ }^\circ\text{C}$		22	100	mV
		$I_o=1\text{mA}-40\text{mA}$, $T_J=25\text{ }^\circ\text{C}$		13	50	mV
Line regulation	ΔV_o	$14.5\text{V}\leq V_i\leq 27\text{V}$, $T_J=25\text{ }^\circ\text{C}$		55	250	mV
		$16\text{V}\leq V_i\leq 27\text{V}$, $T_J=25\text{ }^\circ\text{C}$		49	200	mV
Quiescent Current	I_q	$T_J=25\text{ }^\circ\text{C}$		4.3	6.5	mA
Quiescent Current Change	ΔI_q	$16\text{V}\leq V_i\leq 27\text{V}$			1.5	mA
	ΔI_q	$1\text{mA}\leq I_o\leq 40\text{mA}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$, $T_J=25\text{ }^\circ\text{C}$		70		$\mu\text{V}/V_o$
Ripple Rejection	RR	$15\text{V}\leq V_i\leq 25\text{V}$, $f=120\text{Hz}$	37	42		dB
Dropout Voltage	V_d	$T_J=25\text{ }^\circ\text{C}$		1.7		V

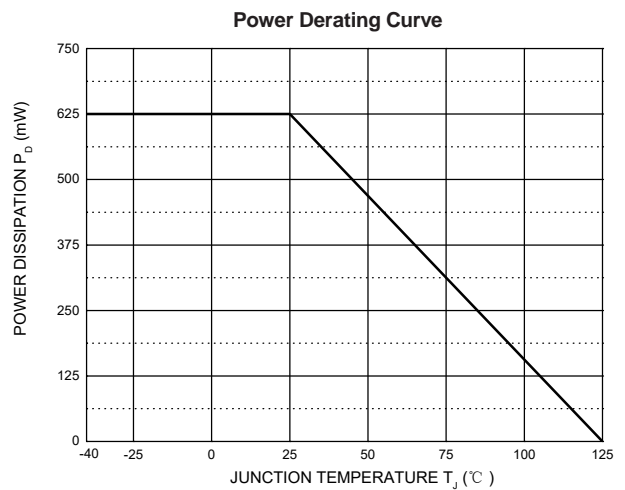
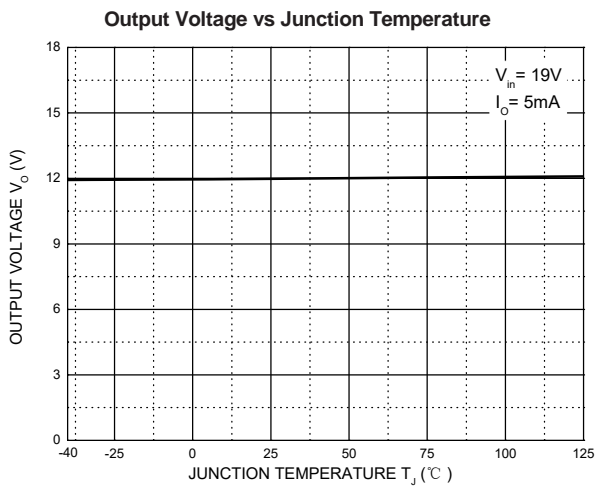
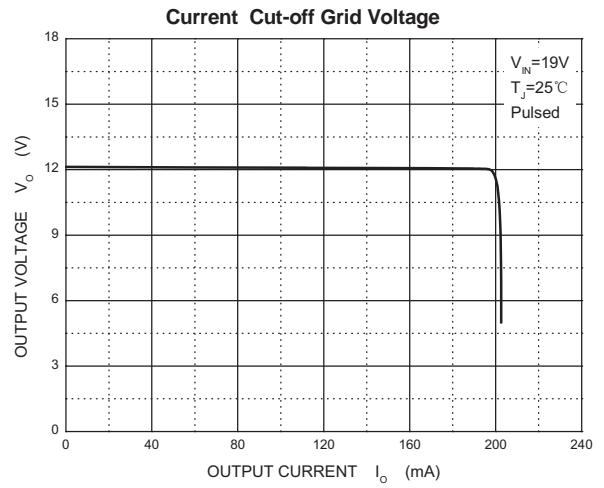
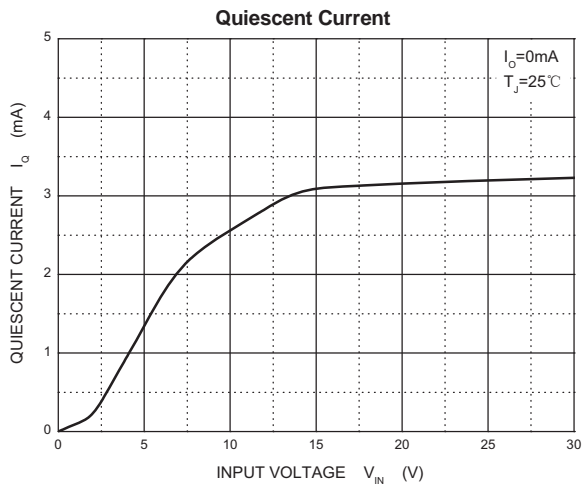
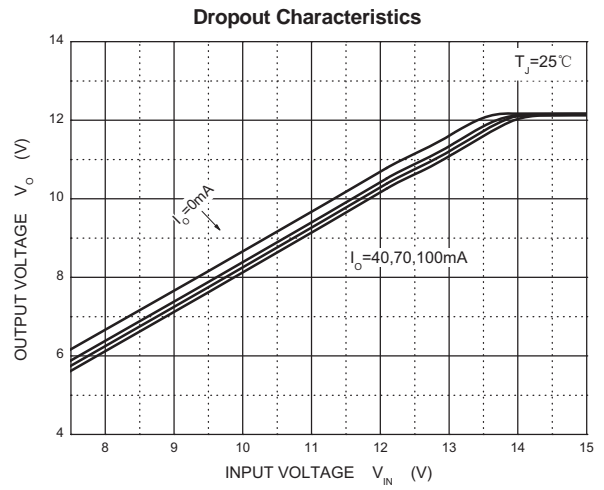
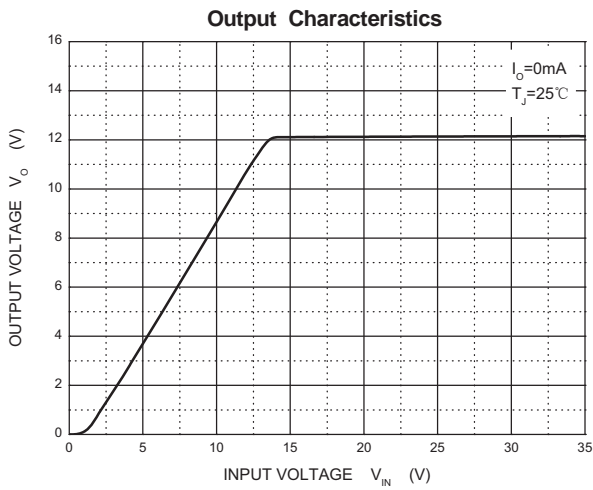
* Pulse test.

Typical application

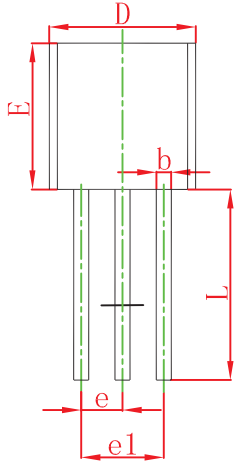
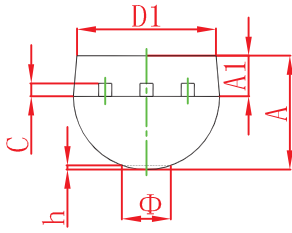


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

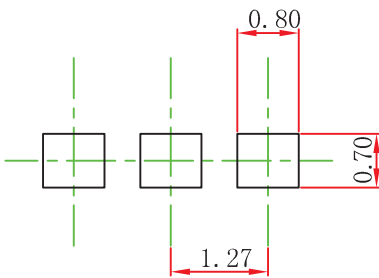


TO-92 Package Outline Dimensions



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	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

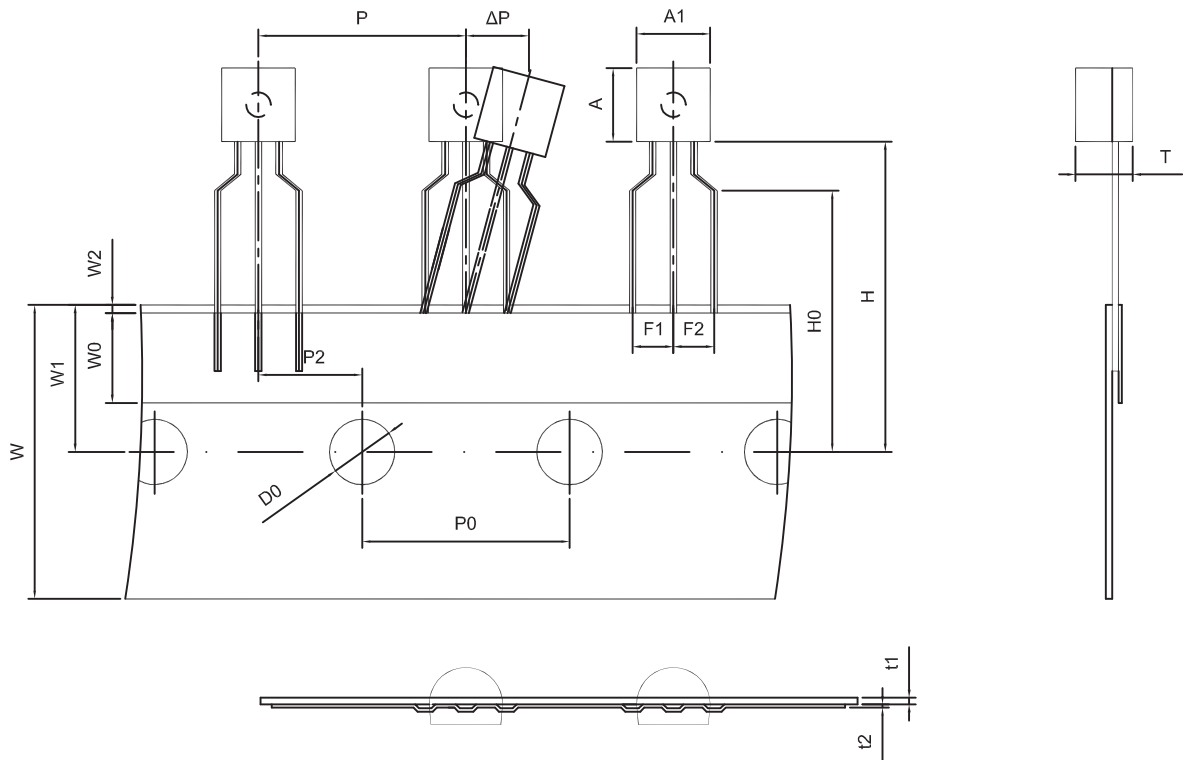
TO-92 Suggested Pad Layout



Note:

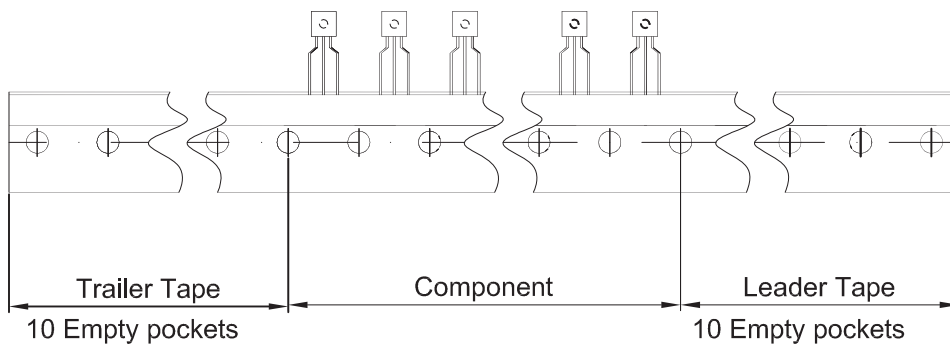
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250

DISCLAIMER

IMPORTANT NOTICE, PLEASE READ CAREFULLY

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