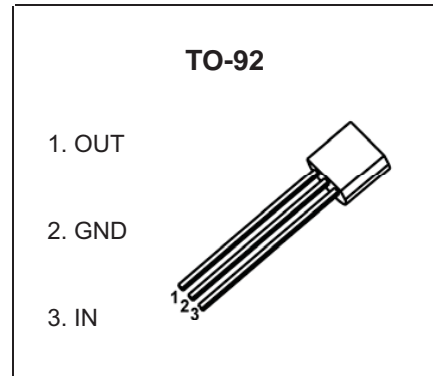


TO-92 Plastic-Encapsulate Voltage Regulator

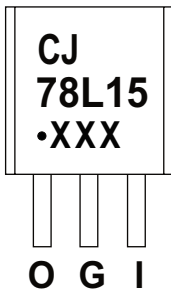
CJ78L15 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
I_{OM}: 0.1A
- Output voltage
V_O: 15V
- Continuous total dissipation
P_D: 0.625 W (T_a= 25 °C)



MARKING



CJ78L15=Device code
Solid dot=Green molding compound device,
if none,the normal device
XXX=Code

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
CJ78L15	TO-92	Bulk	1000pcs/Bag
CJ78L15-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 _{θJA}	166.7	°C/W
Operating Junction Temperature Range	T _{OPR}	-40~+125	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

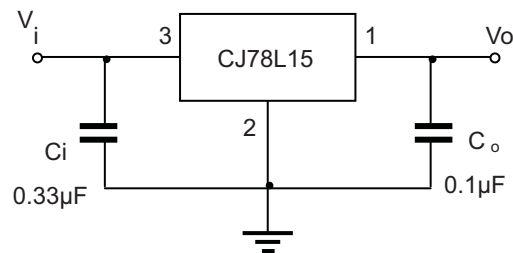
ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$ unless otherwise specified ($V_i=23\text{V}$, $I_o=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_J=25^\circ\text{C}$	14.55	15	15.45	V
		$17.5\text{V}\leq V_i\leq 30\text{V}$, $I_o=1\text{mA}-40\text{mA}$	14.25	15	15.75	V
		$V_i=23\text{V}$, $I_o=1\text{mA}-70\text{mA}$	14.25	15	15.75	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}$, $V_i=23\text{V}$, $T_J=25^\circ\text{C}$		25	150	mV
		$I_o=1\text{mA}-40\text{mA}$, $V_i=23\text{V}$, $T_J=25^\circ\text{C}$		15	75	mV
Line regulation	ΔV_o	$17.5\text{V}\leq V_i\leq 30\text{V}$, $I_o=40\text{mA}$, $T_J=25^\circ\text{C}$		65	300	mV
		$19\text{V}\leq V_i\leq 30\text{V}$, $I_o=40\text{mA}$, $T_J=25^\circ\text{C}$		58	250	mV
Quiescent Current	I_q	$T_J=25^\circ\text{C}$		4.6	6.5	mA
Quiescent Current Change	ΔI_q	$19\text{V}\leq V_i\leq 30\text{V}$, $I_o=40\text{mA}$			1.5	mA
	ΔI_q	$1\text{mA}\leq I_o\leq 40\text{mA}$, $V_i=23\text{V}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$, $T_J=25^\circ\text{C}$		82		$\mu\text{V}/V_o$
Ripple Rejection	RR	$18.5\text{V}\leq V_i\leq 28.5\text{V}$, $f=120\text{Hz}$	34	39		dB
Dropout Voltage	V_d	$T_J=25^\circ\text{C}$		1.7		V

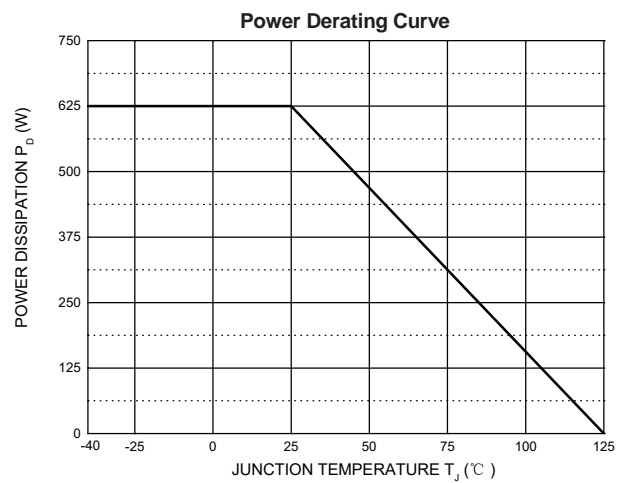
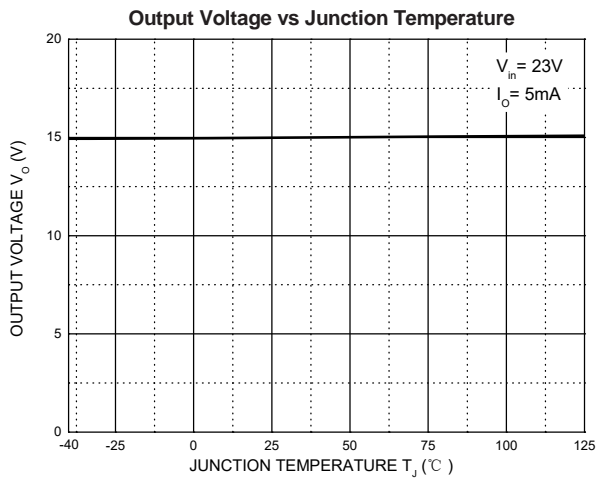
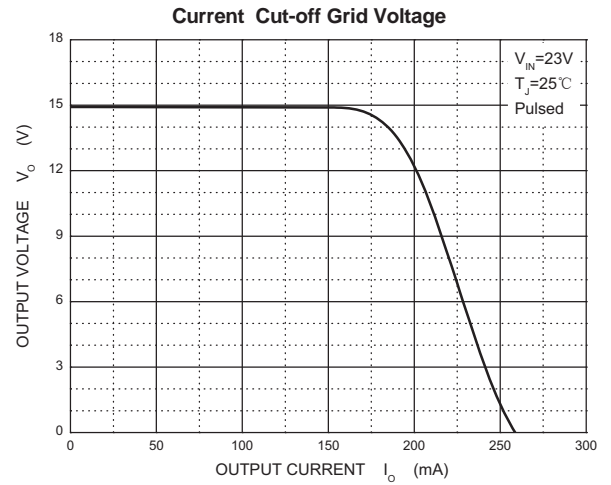
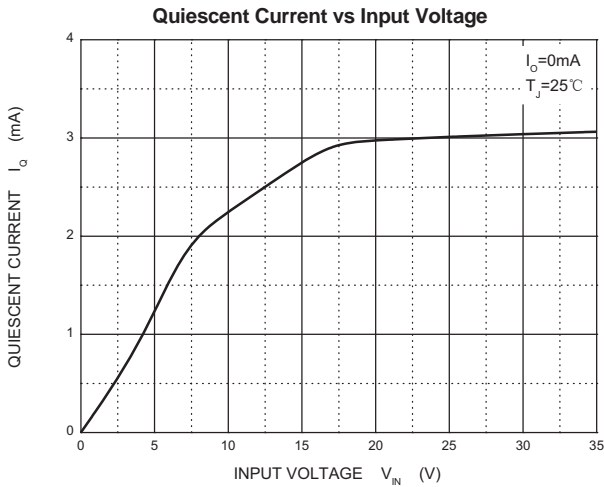
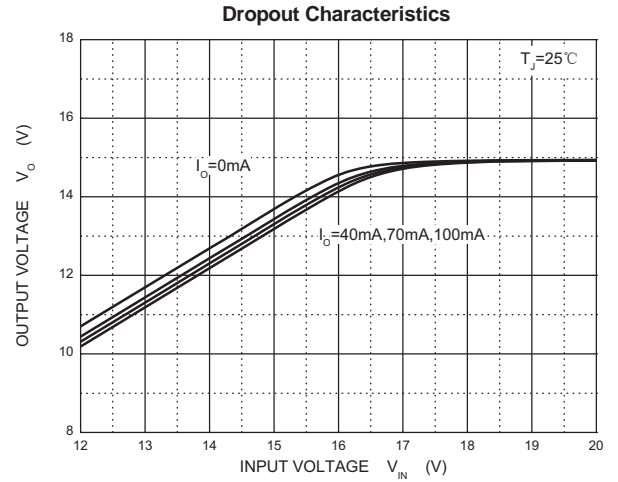
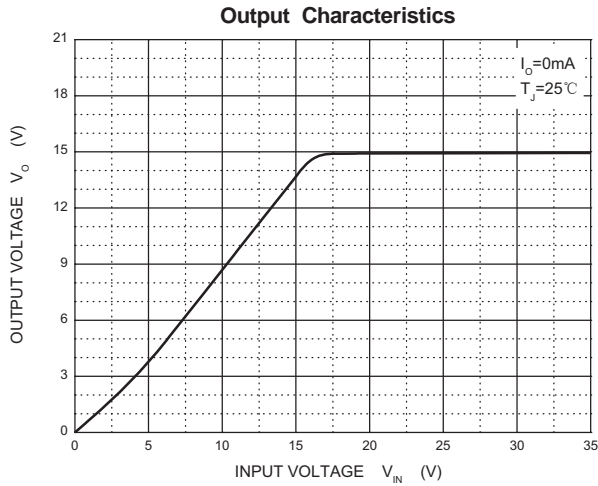
* Pulse test.

TYPICAL APPLICATION

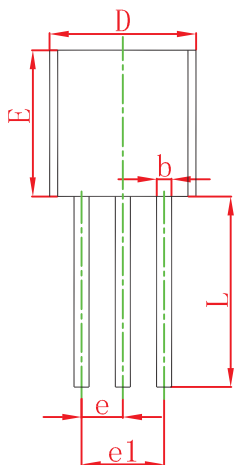
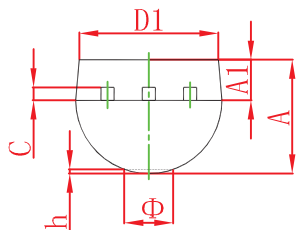


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

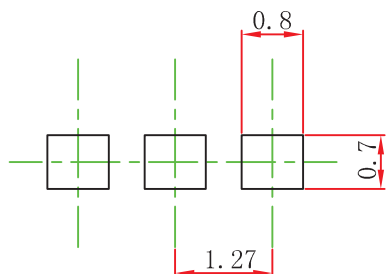


TO-92 Package Outline Dimensions



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	4.400	4.700	0.173	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

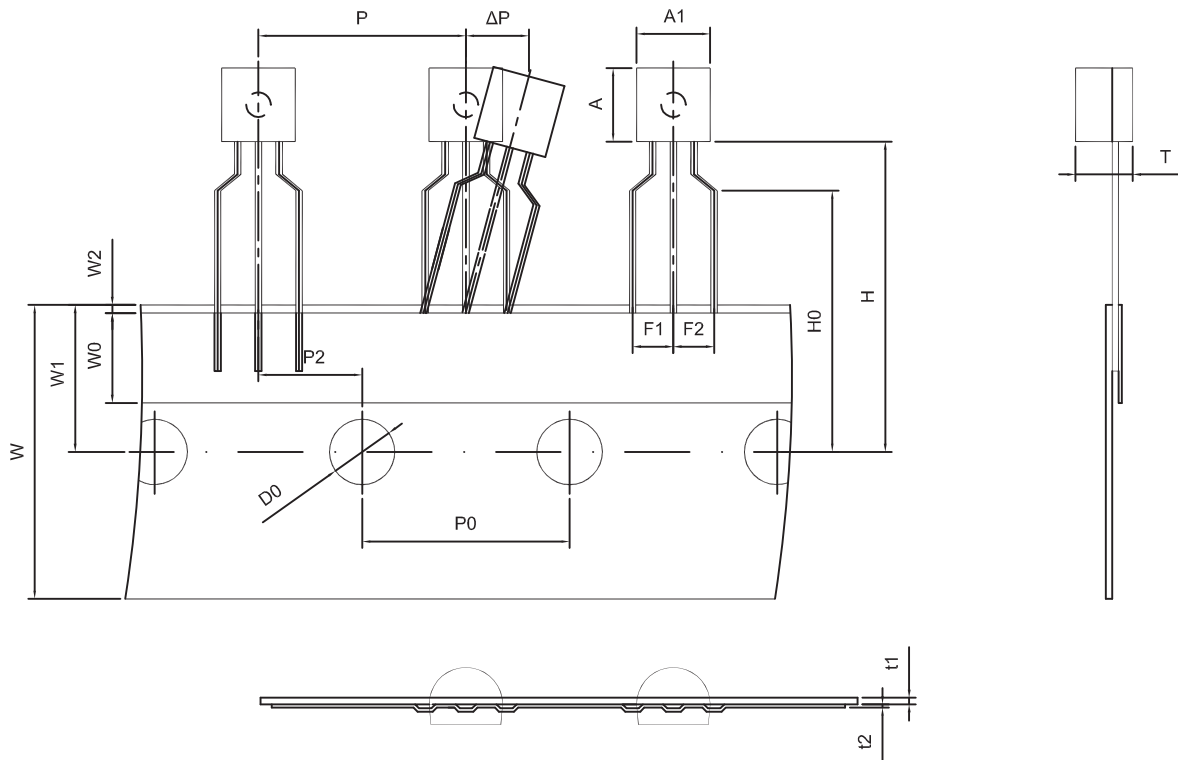


Note:

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

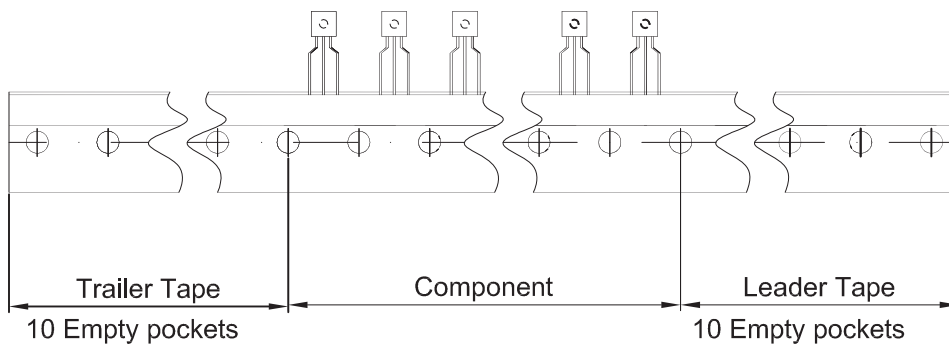
TO-92 PACKAGE TAPEING DIMENSION

TO-92 PACKAGE TAPEING DIMENSION



Dimensions 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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