JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD
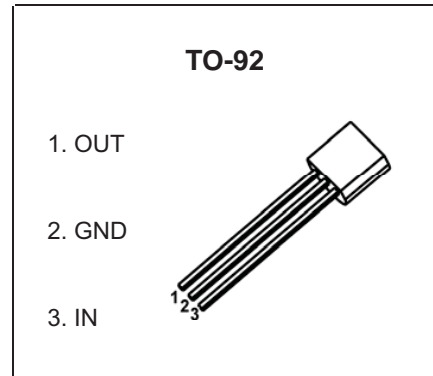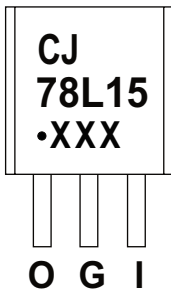
TO-92 Plastic-Encapsulate Voltage Regulator

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 ℃)

TO-92

1. OUT

2. GND

3. IN

MARKING

CJ
78L15
•XXX

O G I

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

ELECTRICAL CHARACTERISTICS

T$_a$=25℃ unless otherwise specified (Vi=23V, Io=40mA, Ci=0.33μF,Co=0.1μF,unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	Vo	T$_J$=25℃	14.55	15	15.45	V
		17.5V≤V$_i$≤30V,Io=1mA-40mA	14.25	15	15.75	V
		V$_i$=23V, Io=1mA-70mA	14.25	15	15.75	V
Load Regulation	△Vo	Io=1mA-100mA, V$_i$=23V,T$_J$=25℃		25	150	mV
		Io=1mA-40mA, V$_i$=23V,T$_J$=25℃		15	75	mV
Line regulation	△Vo	17.5V≤Vi≤30V,Io=40mA,T$_J$=25℃		65	300	mV
		19V≤Vi≤30V,Io=40mA,T$_J$=25℃		58	250	mV
Quiescent Current	Iq	T$_J$=25℃		4.6	6.5	mA
Quiescent Current Change	△Iq	19V≤Vi≤30V, Io=40mA			1.5	mA
	△Iq	1mA≤I$_O$≤40mA, Vi=23V			0.1	mA
Output Noise Voltage	V$_N$	10Hz≤f≤100KHz,T$_J$=25℃		82		μV/Vo
Ripple Rejection	RR	18.5V≤Vi≤28.5V,f=120Hz	34	39		dB
Dropout Voltage	Vd	T$_J$=25℃		1.7		V

* Pulse test.

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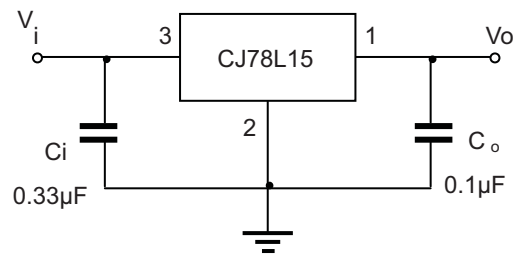
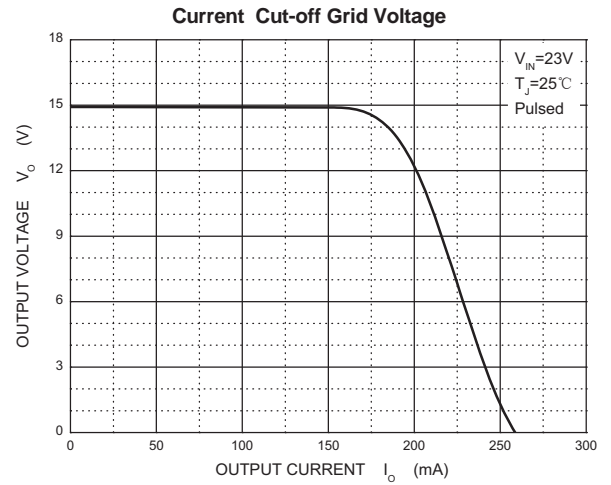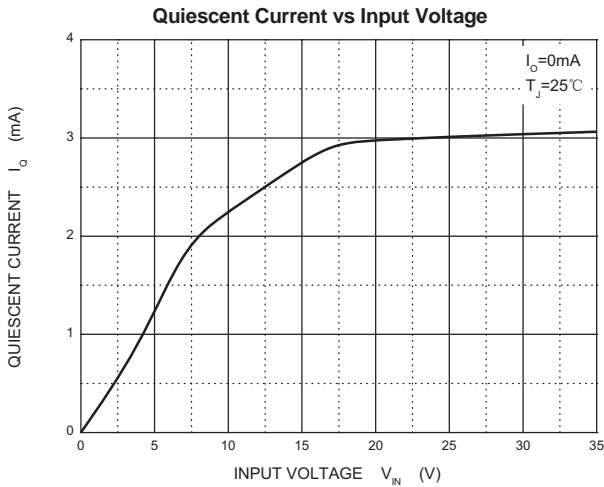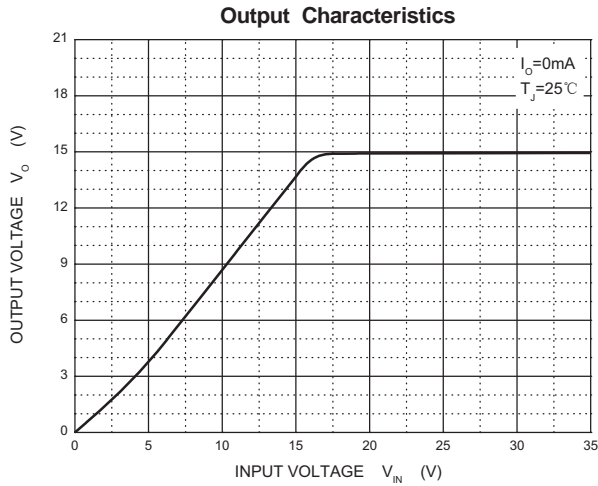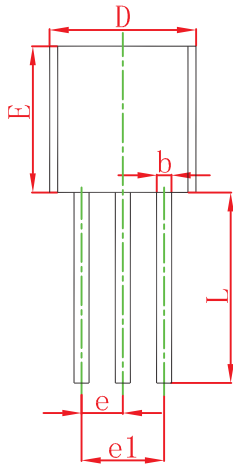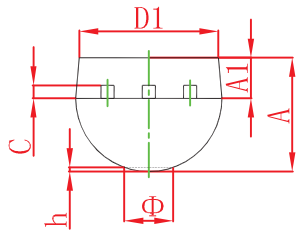Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

Output Characteristics

Dropout Characteristics

Quiescent Current vs Input Voltage

Current Cut-off Grid Voltage

Output Voltage vs Junction Temperature

Power Derating Curve
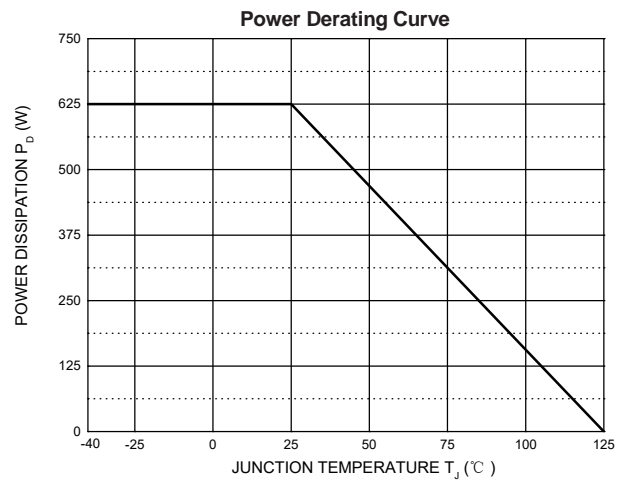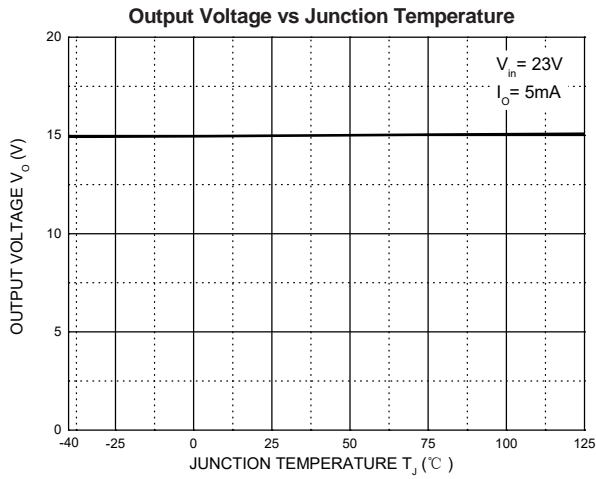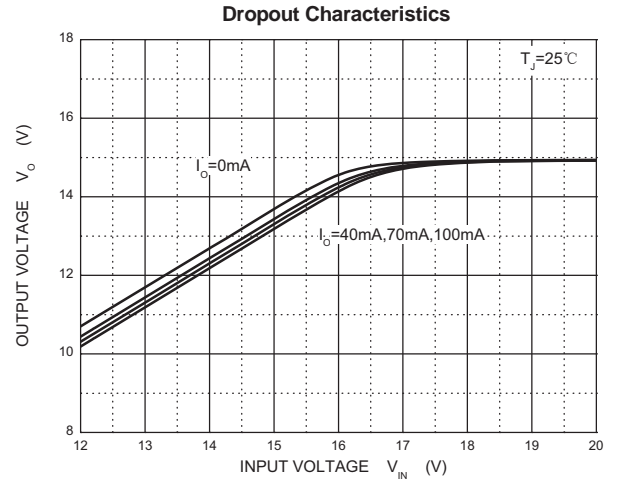
TO-92 Package Outline Dimensions

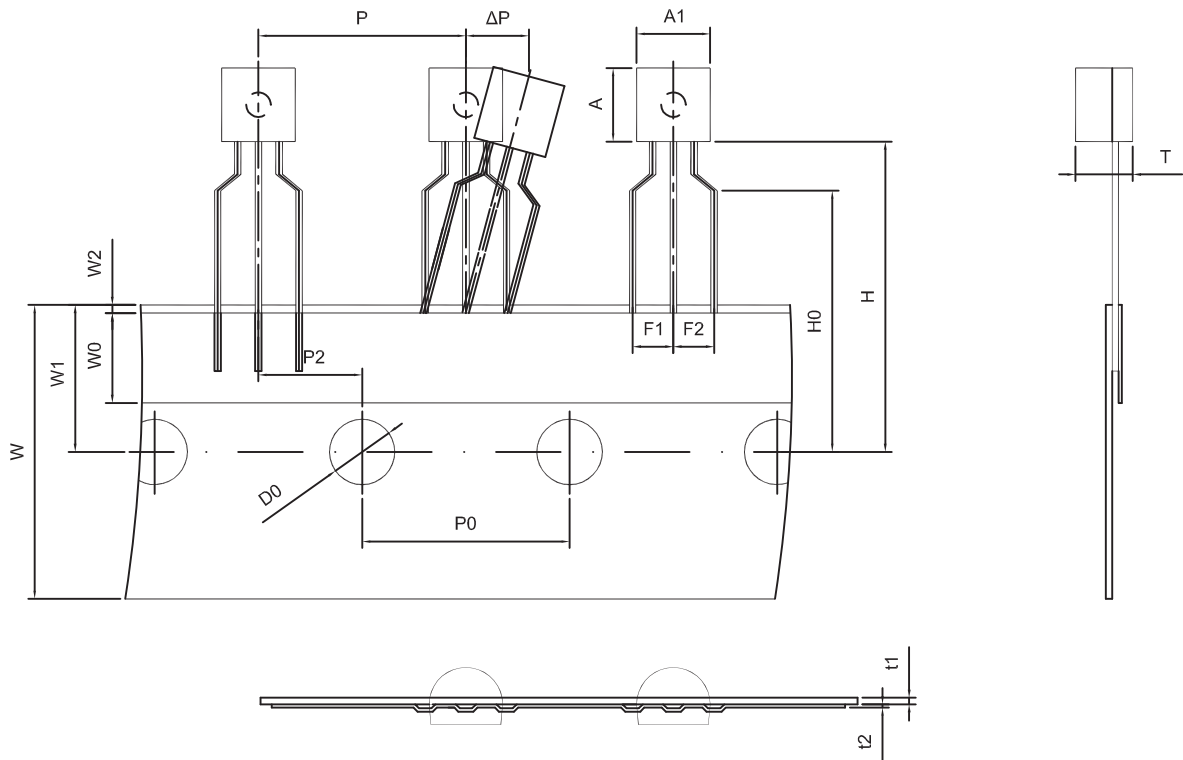| Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	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
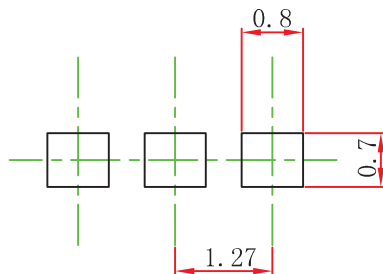
Note:
1. Controlling dimension:in millimeters.
2. General tolerance:± 0.05mm.
3. The pad layout is for reference purposes only.

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

Trailer Tape
10 Empty pockets

Component

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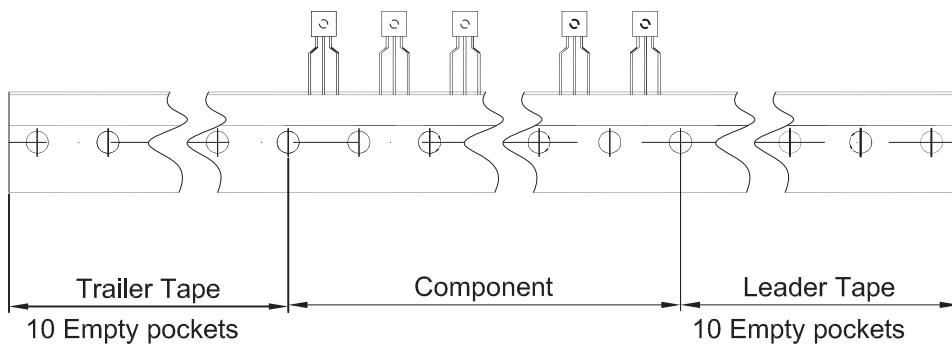
Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250

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