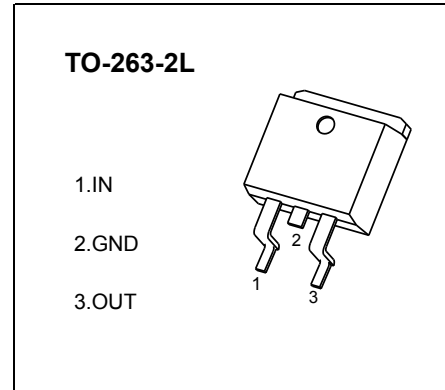




TO-263-2L Plastic-Encapsulate Voltage Regulators

CJ7812 Three-terminal positive voltage regulator FEATURES

- Maximum output current
 $I_{OM}: 1.5\text{ A}$
- Output voltage
 $V_O: 12\text{ V}$
- Continuous total dissipation
 $P_D: 1.5\text{ W}$ ($T_a = 25\text{ }^\circ\text{C}$)



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

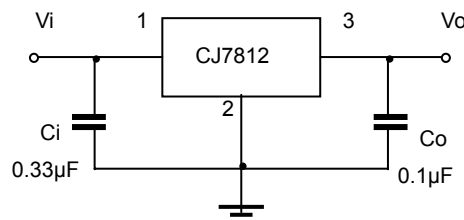
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=19\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	25°C	11.5	12.0	12.5	V
		$I_o = 5\text{mA} - 1\text{A}$, $14.5\text{V} \leq V_i \leq 27\text{V}$	-25-125 $^\circ\text{C}$	11.4	12.0	12.6
Load Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}$	25 $^\circ\text{C}$	10	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$	25 $^\circ\text{C}$	3	120	mV
Line Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25 $^\circ\text{C}$	12	240	mV
		$I_o = 250\text{mA} - 750\text{mA}$	25 $^\circ\text{C}$	4	120	mV
Quiescent Current	I_q		25 $^\circ\text{C}$	4.3	8	mA
Quiescent Current Change	ΔI_q	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$	-25-125 $^\circ\text{C}$		0.5	mA
		$14.5\text{V} \leq V_i \leq 30\text{V}$	-25-125 $^\circ\text{C}$		1.0	mA
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	-25-125 $^\circ\text{C}$	-1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$f = 10\text{Hz} \text{ to } 100\text{KHz}$	25 $^\circ\text{C}$	75		$\mu\text{V}/V_o$
Ripple Rejection	RR	$f = 120\text{Hz}$, $15\text{V} \leq V_i \leq 25\text{V}$	-25-125 $^\circ\text{C}$	55	71	dB
Dropout Voltage	V_d	$I_o = 1.0\text{A}$	25 $^\circ\text{C}$	2		V
Output Resistance	R_o	$f = 1\text{KHz}$	-25-125 $^\circ\text{C}$	18		m Ω
Short Circuit Current	I_{sc}		25 $^\circ\text{C}$	350		mA
Peak Current	I_{pk}		25 $^\circ\text{C}$	2.2		A

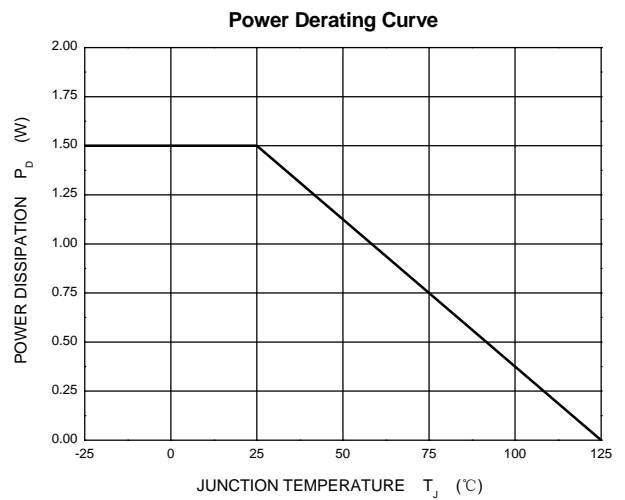
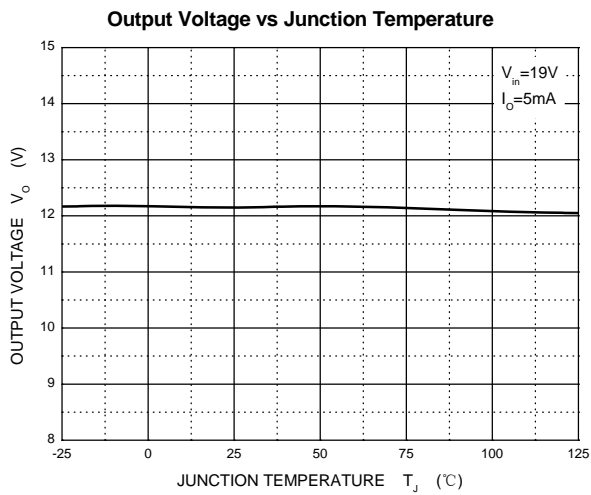
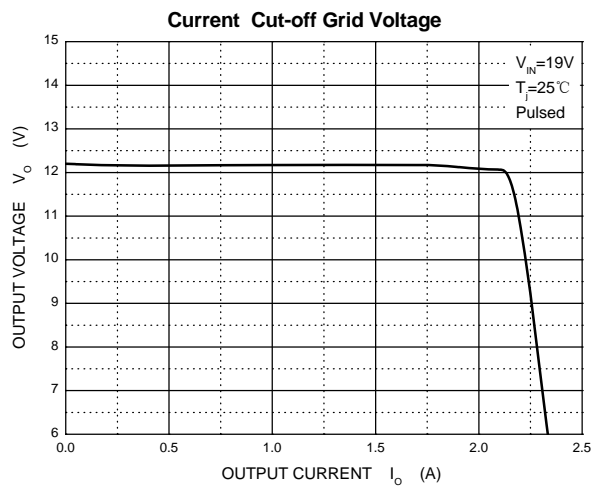
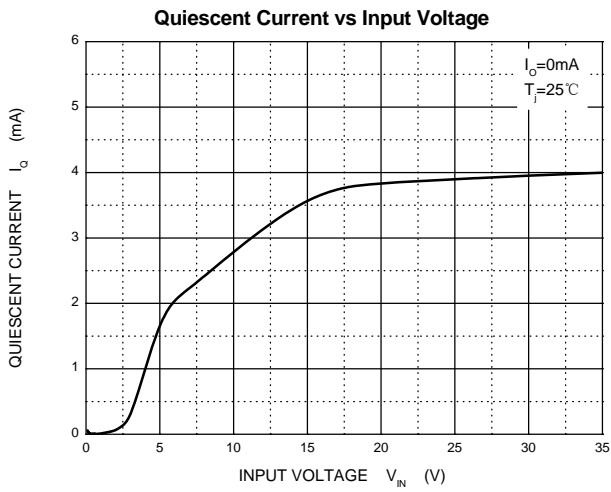
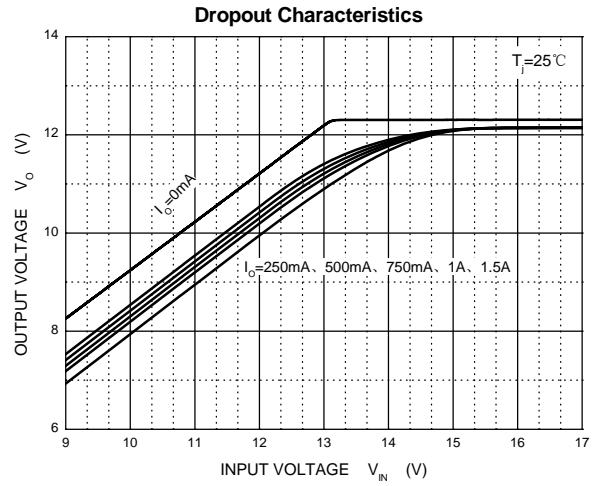
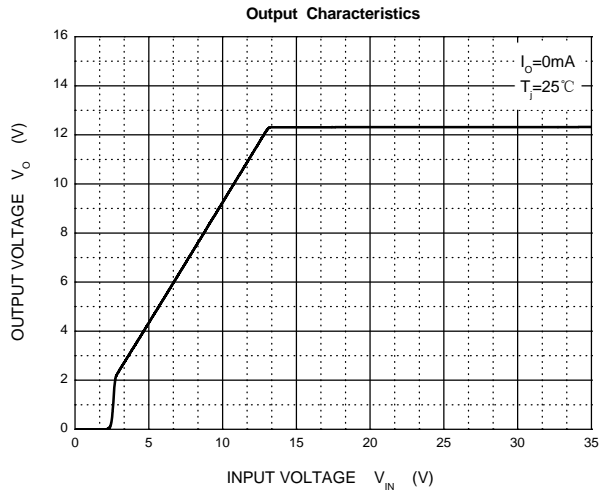
* Pulse test.

TYPICAL APPLICATION

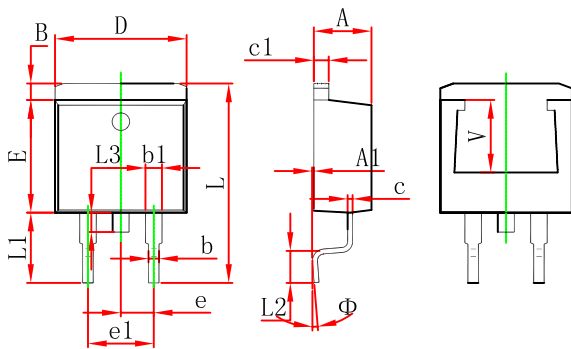


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

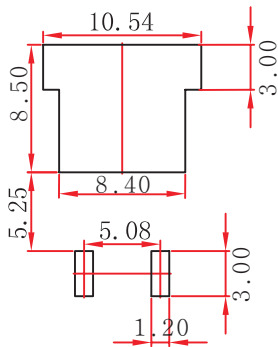


TO-263-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.120	1.420	0.044	0.056
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	14.940	15.500	0.588	0.610
L1	4.950	5.450	0.195	0.215
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
Φ	0°	8°	0°	8°
V	5.600 REF.		0.220 REF.	

TO-263-2L Suggested Pad Layout



Note:

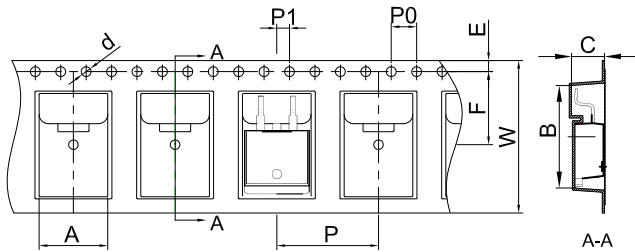
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

TO-263-2L Tape and Reel

TO-263-2L Embossed Carrier Tape

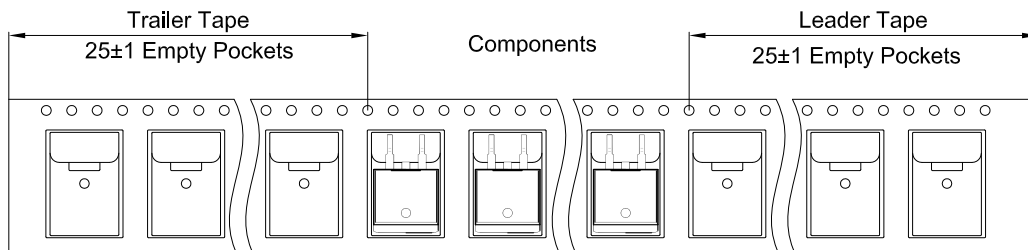


Packaging Description:

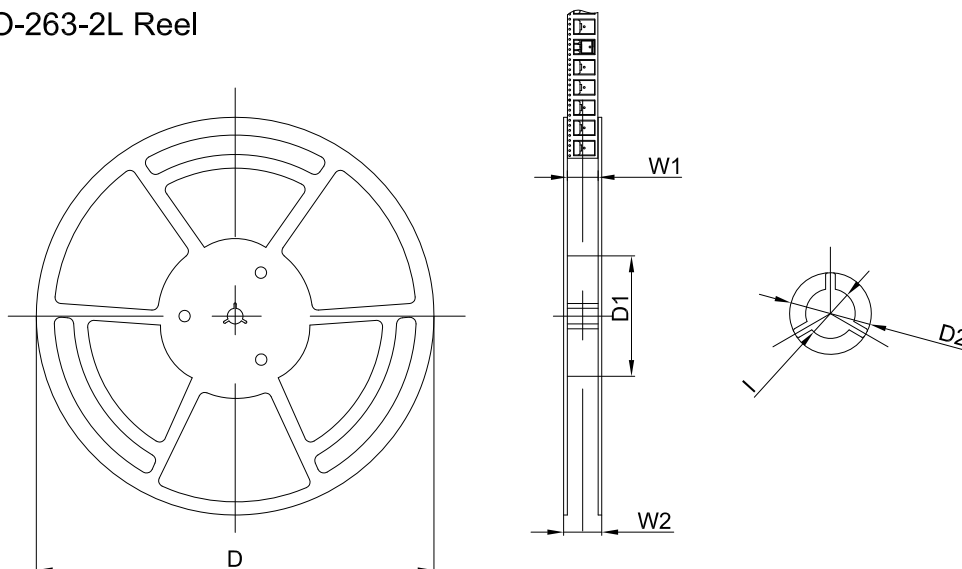
TO-263-2L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 800 units per 13" or 33.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-263-2L	10.80	16.13	5.21	Ø1.55	1.75	11.50	4.00	16.00	2.00	24.00

TO-263-2L Tape Leader and Trailer



TO-263-2L Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13"Dia	Ø330.00	100.00	Ø21.00	24.4	30.4	Ø13.00

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
800 pcs	13 inch	800 pcs	340×336×36	8,000 pcs	400×353×365	