

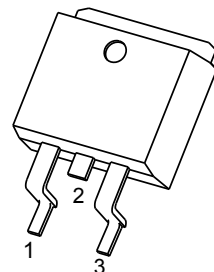
VC7806 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 1.5A$
- Output voltage
 $V_O: 6V$
- Continuous total dissipation
 $P_D: 1.5W$ ($T_a = 25^\circ C$)

TO-263-2L

1. IN
2. GND
3. OUT



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

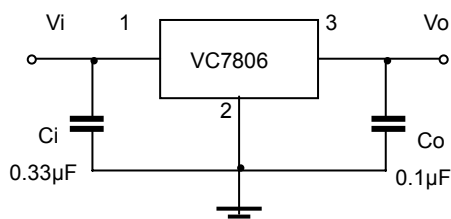
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ C/W$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ C$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ C$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=11V, I_o=500mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

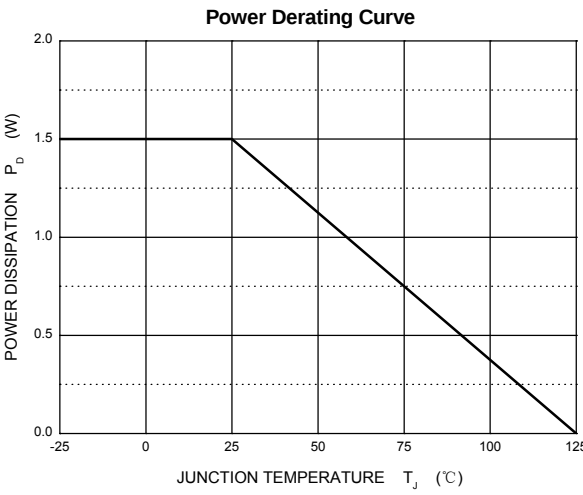
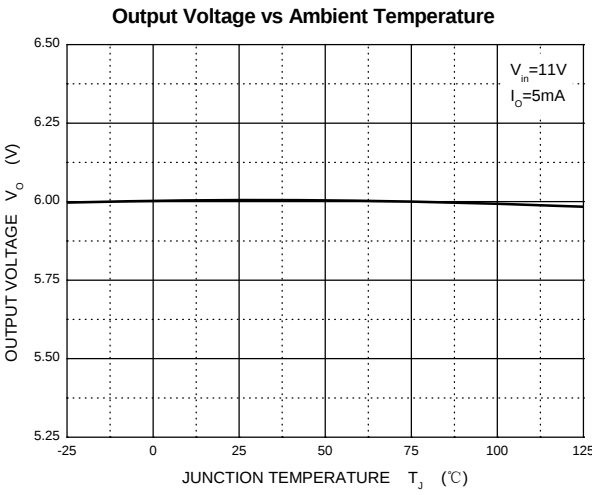
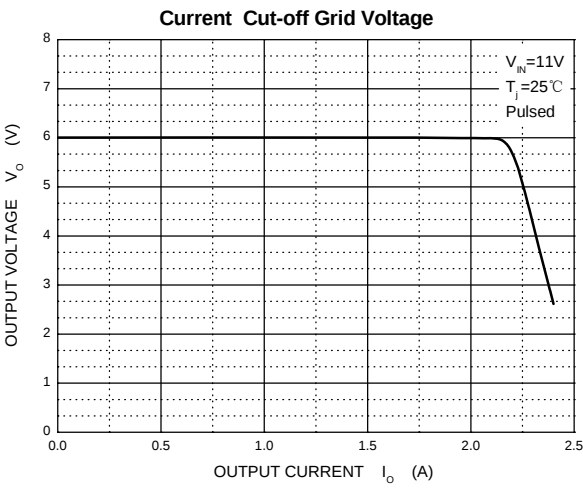
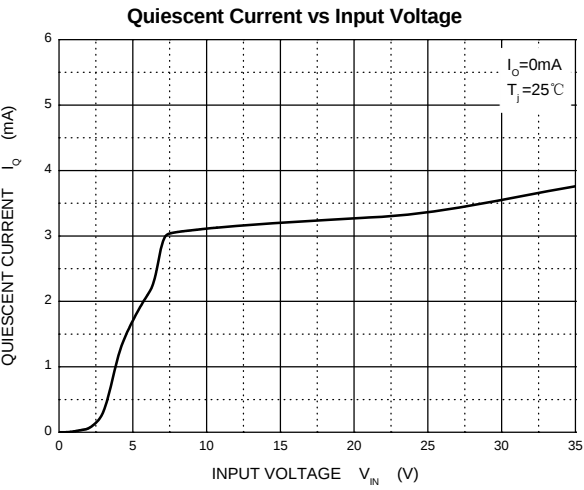
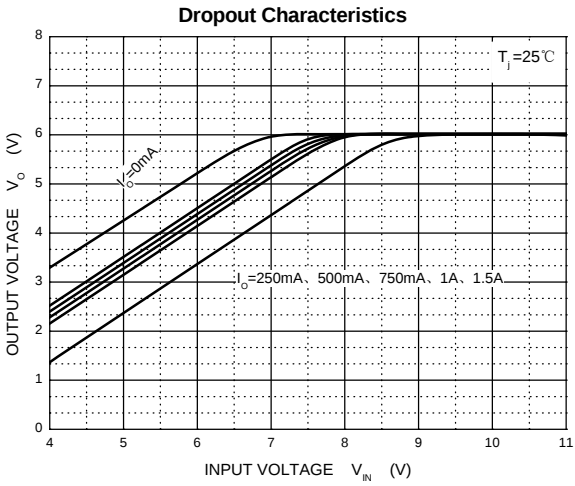
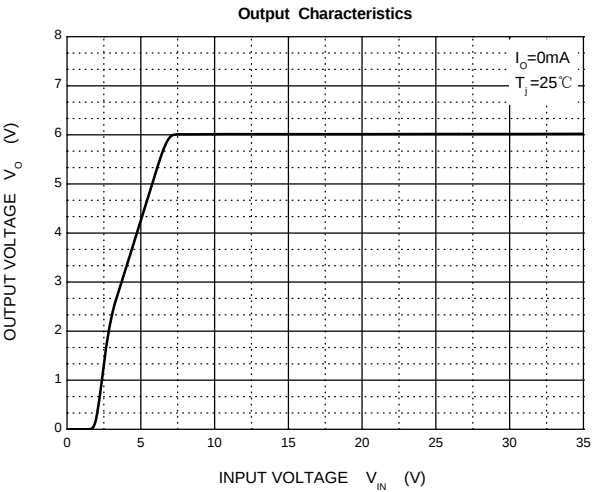
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25°C	5.75	6	6.25	V
		8V≤Vi≤21V, Io=5mA-1A	-25-125°C	5.7	6	6.3	V
Load Regulation	△Vo	Io=5mA-1.5A	25°C		14	120	mV
		Io=250mA-750mA	25°C		4	60	mV
Line regulation	△Vo	8V≤Vi≤25V	25°C		5	120	mV
		9V≤Vi≤13V	25°C		1.5	60	mV
Quiescent Current	Iq		25°C		4.3	8	mA
Quiescent Current Change	△Iq	8V≤Vi≤25V	-25-125°C			1.3	mA
		5mA≤Io≤1A	-25-125°C			0.5	mA
Output voltage drift	△Vo/△T	Io=5mA	0-125°C		-0.8		mV/°C
Output Noise Voltage	VN	10Hz≤f≤100KHz	25°C		45		μV/Vo
Ripple Rejection	RR	9V≤Vi≤19V,f=120Hz	-25-125°C	59	75		dB
Dropout Voltage	Vd	Io=1A	25°C		2		V
Output resistance	RO	f=1KHz	25°C		10		mΩ
Short Circuit Current	Isc		25°C		550		mA
Peak Current	Ipk		25°C		2.2		A

* Pulse test.

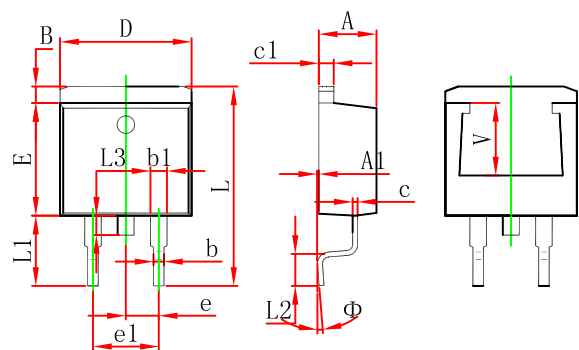
TYPICAL APPLICATION



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

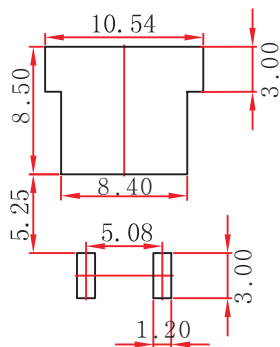


TO-263-2L Package Outline Dimensions



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.	

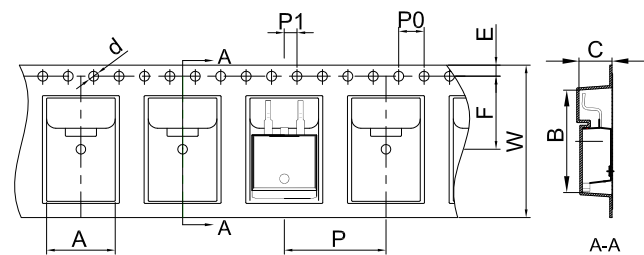
TO-263-2L Suggested Pad Layout



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

TO-263-2L Tape and Reel

TO-263-2L Embossed Carrier Tape

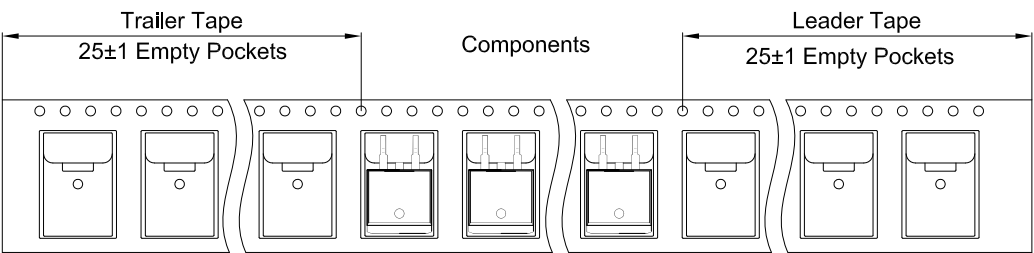


Packaging Description:

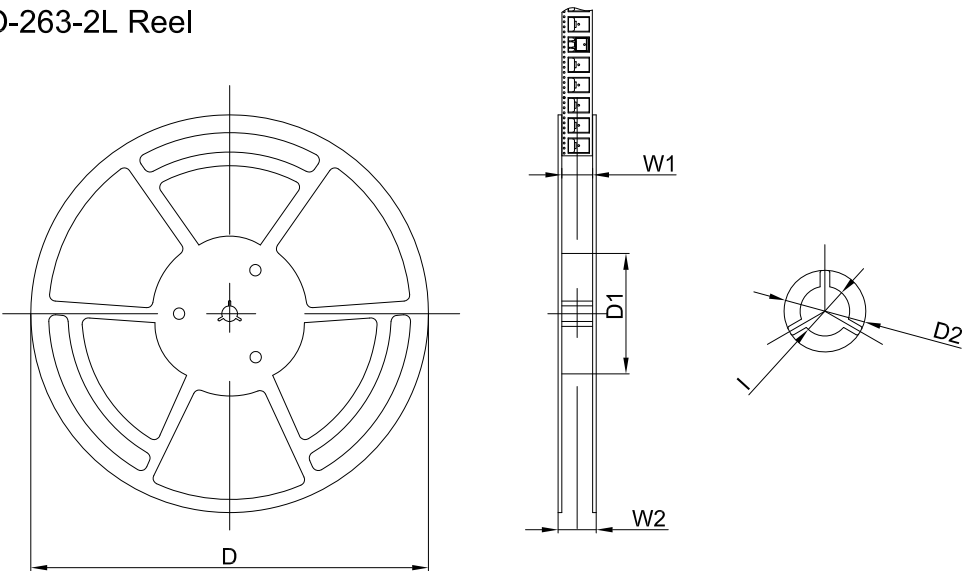
TO-263-2L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	