

Preliminary PJ1537

Dual 1A Low Dropout Fixed Voltage Regulators

The PJ1537 provides 2 output voltage : 3.3V and either 2.5V or 1.8V fixed with 1.0A each output current capability. These devices have been optimized for low voltage where transient response and minimum input voltage critical.

Current limit features protect the outputs against short circuit currents. On-chip thermal limiting provides protection against any combination of overload and ambient temperature that would create excessive junction temperatures.

The PJ1537 series regulators are available in 5-lead TO-263 power packages.

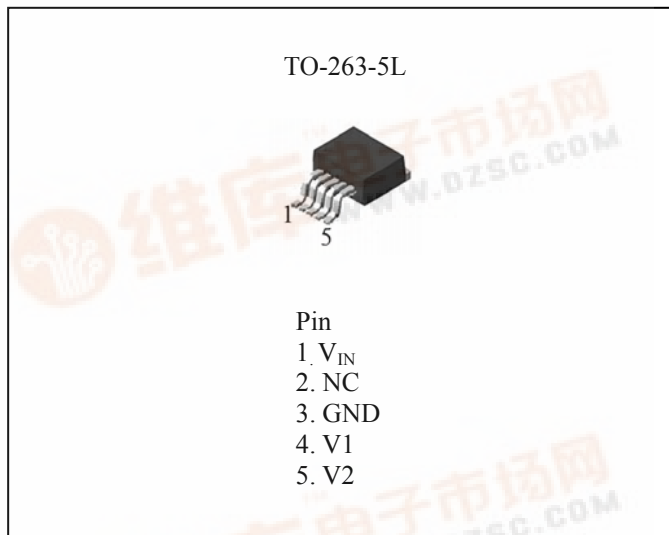
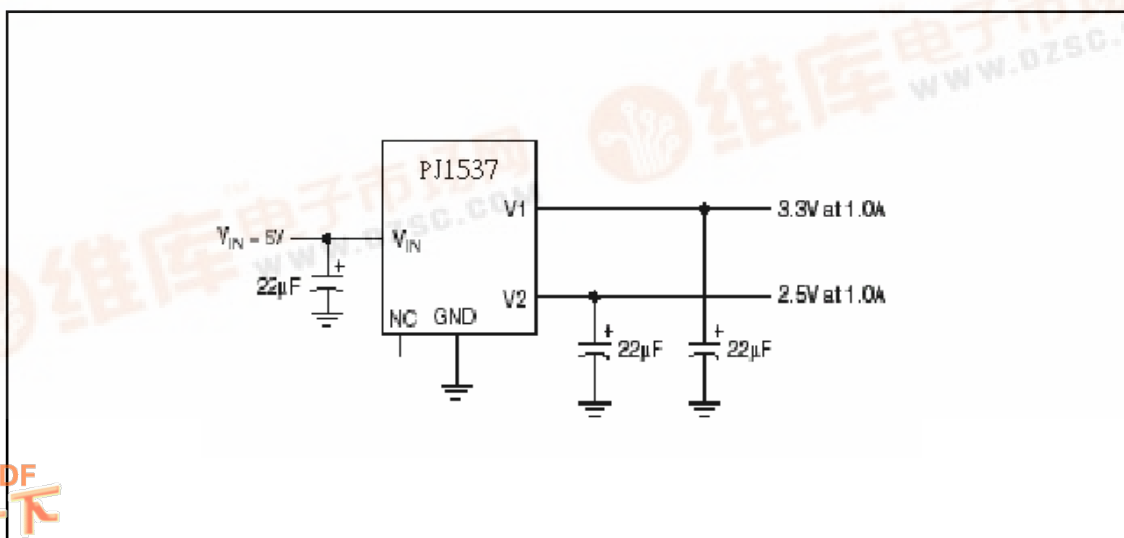
FEATURES

- Hard Disk Drives, CD-ROMs, DVDs
- High efficiency linear regulators
- Post regulators for switching supplies
- ADSL and Cable Modems
- 5V to 3.3V and 2.5V linear regulators
- Motherboard with multiple supplies

APPLICATIONS

- Battery protection
- Load switch
- Power management

BLOCK DIAGRAM



ORDERING INFORMATION

Device	Operating Temperature	Package
PJ1537CM	0°C TO 75°C	TO-263

MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	10	V
Operating Junction Temperature Range	T_J	0 to 150	°C
Storage Temperature Range	T_{str}	-65 to 150	°C
Lead Temperature(Soldering, 10sec)	-	300	°C

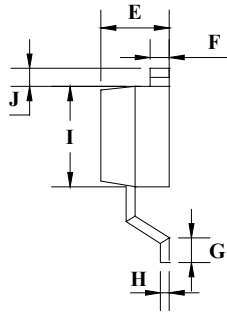
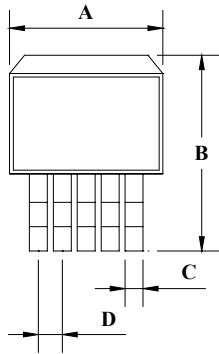
ELECTRICAL CHARACTERISTICS($V_{IN} \leq 7V$, $T_J=25^\circ C$ (unless otherwise specified))

The Denotes specifications which apply over the specified operating temperature range of 0°C to 125°C junction temperature.

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltages 1	V_{out1}	$10mA \leq I_{OUT} \leq 1A$ $4.75V \leq V_{IN} \leq 7V$	-2%	-	+2%	V
Output Voltages 2	V_{out2}	$10mA \leq I_{OUT} \leq 1A$ $4.75V \leq V_{IN} \leq 7V$	3.2	-	-	V
Time to Output Voltages Valid	-	From $V_{IN} \geq 4.75V$	-	5	-	msec
Line Regulation 1,2(both Outputs)	RegLine	$4.75V \leq V_{IN} \leq 7V, I_{OUT}=10mA$	-	0.005	0.5	%
		$4.75V \leq V_{IN} \leq 7V, I_{OUT}=1mA$	-	0.05	0.5	%
Dropout Voltage(3.3 output)	V_{drop}	$\Delta V_{OUT}= 1\%$, $I_{OUT}=1A$	-	1.1	1.3	V
Current Limit(Both outputs)	I_{lmt}	$V_{IN}=5V$	1.0	1.5	-	A
Minimum Load Current(Both outputs)	$I_{load(min)}$	$4.75V \leq V_{IN} \leq 7V$	1.0	-	-	mA
Quiescent Current	I_Q	$V_{IN}=7V$	-	6	15	mA
Ripple Rejection 3(both outputs)	G_{RR2}	$F=120Hz$, $C_{OUT}=22Mf$ Tantalum, $V_{IN}=5V$, $I_{OUT}=1A$	60	-	-	dB
Long-Term Stability	-	$T_A=125^\circ C$, 1000hrs	-	0.03	1.0	%
Ripple Rejection	G_{RR}	$T_A=125^\circ C$, $10Hz \leq f \leq 10kHz$	60	2.5	-	dB
Thermal Resistance, Junction to case	-	TO-263	-	2	-	°C/W
Thermal Shutdown	-		-	155	-	°C
Thermal Shutdown Hysteresis	-	Junction Temperature	-	10	-	°C

Notes:

1. See thermal regulation specifications for changes in output voltage due to heation effects. Load and line regulation are measured at a constant junction temperature by low duty cycle pulse testing.
2. Power dissipation is determined by input/output differential and the output current. Guaranteed maximum output power will not be available over the full input/output voltage range.



TO-263-5L DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.22	10.26	0.402	0.404
B	14.60	15.87	0.575	0.625
C	0.75	0.77	0.030	0.030
D	1.573	1.827	0.062	0.072
E	4.56	4.57	0.179	0.180
F	1.24	1.27	0.049	0.05
G	2.28	2.79	0.090	0.110
H	0.28	0.32	0.011	0.013
I	8.24	8.28	0.324	0.326
J	1.54	1.80	0.060	0.071