Preliminary – **LD6855**

Adjustable Precision Shunt Regulators

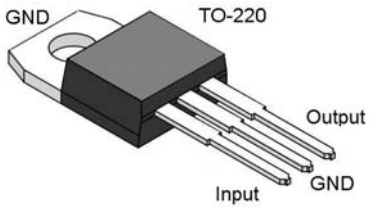
Features

- 3-terminal regulators
- Output current up to 100mA
- No external components
- Internal thermal overload protection

Applications

- TFT flat panel backlighting
- AC/DC LED lamp
- LED traffic light
- T5, T8 LED line bar
- MR-16 lamp
- Signage or decorative LED lamp

Package Pin Out



General Description

This series of fixed voltage monolithic integrated circuit voltage regulators is designed for a wide range of applications. These applications include on-card regulation for elimination of noise and distribution problems associated with single-point regulation.
In addition, they can be used with power-pass elements to make high-current voltage regulators. Each of these regulators can deliver up to 100mA of output current. The internal limiting and thermal shutdown features of these regulators make them essentially immune to overload. When used as a replacement for a Zener diode-resistor combination, an effective improvement in output impedance can be obtained together with lower-bias current.

Ordering Information

			Packing Options	
Part No.	Output	Package	Bag (BG)	Tape & Reel (TR)
LD6855	5V	TO-220-3	LD6855T3-TU	LD6855T3-TR
LD6856	6V		LD6856T3-TU	LD6856T3-TR
LD6858	8V		LD6858T3-TU	LD6858T3-TR
LD6885	8.5V		LD6885T3-TU	LD6885T3-TR
LD6859	9V		LD6859T3-TU	LD6859T3-TR
LD6860	10V		LD6860T3-TU	LD6860T3-TR
LD6862	12V		LD6862T3-TU	LD6862T3-TR
LD6865	15V		LD6865T3-TU	LD6865T3-TR
LD6868	18V		LD6868T3-TU	LD6868T3-TR
LD6870	20V		LD6870T3-TU	LD6870T3-TR
LD6874	24V		LD6874T3-TU	LD6874T3-TR
LD6877	27V		LD6877T3-TU	LD6877T3-TR

- Package material default is “Green” package.

Product Marking

LD8888
SSSSS…
●

- ✧ Line 1 – “LD” is a fixed character
  8888: product name
- ✧ Line 2 – SSSSS…: lot number

Absolute Maximum Ratings

Parameter	Others	LD6874 LD6877	Units
Input voltage	30	40	V
Continuous total dissipation at 25°C free air temperature	2		W
Continuous total dissipation ≦25°C case temperature	15		W
Storage temperature range	-65~+150		°C
Operating free-air, case, or virtual junction temperature range	-10~+70		°C
Lead temperature (1.6mm aside from the case,10 seconds)	260		°C

The values beyond the boundaries of absolute maximum rating may cause the damage to the device. Functional operation in this context is not implied. Continuous use of the device at the absolute rating level might influence device reliability. All voltages have their reference to device ground.

Recommended operating conditions

Parameter	Symbol	Device Name	Min	Max	Unit
Input Voltage	V_{IN}	LD6855	7	25	V
		LD6856	8	25	V
		LD6858	10.5	25	V
		LD6885	10.5	25	V
		LD6859	11.5	27	V
		LD6860	12.5	28	V
		LD6862	14.5	30	V
		LD6865	17.5	30	V
		LD6868	21	33	V
		LD6870	23	36	V
		LD6874	27	38	V
		LD6877	30	40	V
Output Current	I_{OUT}	–	–	1.5	A
Operating virtual junction temperature	T_J	–	-10	70	°C

Electrical Characteristics

LD6855 is working under V_{IN}=10V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions[*1]	T_J	Min	Typ.	Max	Unit
Output voltage[*2]	V_O	–	25°C	4.8	5	5.2	V
		I_O= 5mA~1A, V_I=7~20V[*3]	-10~+70°C	4.75	5	5.25	
Input line regulation	$V_{LINEREG}$	V_I= 7~25V	25°C	–	3	100	mV
		V_I= 8~12V		–	1	50	
Ripple rejection	G_{RIPPLE}	V_I= 8~18V, f= 120Hz	-10~+70°C	62	78	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	15	100	mV
		I_O= 250~750mA		–	5	50	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.017	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	40	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	40	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.2	8	mA
Bias current change	ΔI_{BIAS}	V_I= 7~25V	-10~+70°C	–	–	1.3	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	750	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:

*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.

*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.

*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6856 is working under V_{IN}=11V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	5.75	6	6.25	V
		I_O= 5mA~1A, V_I= 8~21V*3	-10~+70°C	5.7	6	6.3	
Input line regulation	$V_{LINEREG}$	V_I= 8~25V	25°C	–	5	120	mV
		V_I= 9~13V		–	1.5	60	
Ripple rejection	G_{RIPPLE}	V_I= 9~19V, f= 120Hz	-10~+70°C	59	75	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	14	120	mV
		I_O= 250~750mA		–	4	60	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.019	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−0.8	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	45	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 8~25V	-10~+70°C	–	–	1.3	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	550	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

LD6858 is working under V_{IN}=14V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	7.7	8	8.3	V
		I_O= 5mA~1A, V_I= 10.5~23V*3	-10~+70°C	7.6	8	8.4	
Input line regulation	$V_{LINEREG}$	V_I= 10.5~25V	25°C	–	6	160	mV
		V_I= 11~17V		–	2	80	
Ripple rejection	G_{RIPPLE}	V_I= 11.5~21.5V, f= 120Hz	-10~+70°C	55	72	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	160	mV
		I_O= 250~750mA		–	4	80	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.016	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−0.8	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	52	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 10.5~25V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	450	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6885 is working under V_{IN}=15V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	8.15	8.5	8.85	V
		I_O= 5mA~1A, V_I= 11~23.5V*3	-10~+70°C	8.1	8.5	8.9	
Input line regulation	$V_{LINEREG}$	V_I= 10.5~25V	25°C	–	6	170	mV
		V_I= 11~17V		–	2	85	
Ripple rejection	G_{RIPPLE}	V_I= 11.5~21.5V, f= 120Hz	-10~+70°C	54	70	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	170	mV
		I_O= 250~750mA		–	4	85	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.016	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−0.8	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	55	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 10.5~25V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	450	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

LD6859 is working under V_{IN}=16V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	8.65	9	9.35	V
		I_O= 5mA~1A, V_I= 11.5~24V*3	-10~+70°C	8.55	9	9.45	
Input line regulation	$V_{LINEREG}$	V_I= 11.5~27V	25°C	–	7	180	mV
		V_I= 13~19V		–	2	90	
Ripple rejection	G_{RIPPLE}	V_I= 12~22V, f= 120Hz	-10~+70°C	55	70	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	180	mV
		I_O= 250~750mA		–	4	90	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.018	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.0	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	60	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 11.5~27V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	400	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6860 is working under V_{IN}=17V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	9.6	10	10.4	V
		I_O= 5mA~1A, V_I= 12.5~25V*3	-10~+70°C	9.5	10	10.5	
Input line regulation	$V_{LINEREG}$	V_I= 12.5~28V	25°C	–	7	200	mV
		V_I= 14~20V		–	2	100	
Ripple rejection	G_{RIPPLE}	V_I= 13~23V, f= 120Hz	-10~+70°C	55	71	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	200	mV
		I_O= 250~750mA		–	4	100	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.018	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.0	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	70	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 12.5~28V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	400	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

LD6862 is working under V_{IN}=19V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	11.5	12	12.5	V
		I_O= 5mA~1A, V_I= 14.5~27V*3	-10~+70°C	11.4	12	12.6	
Input line regulation	$V_{LINEREG}$	V_I= 14.5~30V	25°C	–	10	240	mV
		V_I= 16~22V		–	3	120	
Ripple rejection	G_{RIPPLE}	V_I= 15~25V, f= 120Hz	-10~+70°C	55	71	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	240	mV
		I_O= 250~750mA		–	4	120	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.018	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.0	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	75	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 14.5~30V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	350	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.2	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6865 is working under V_{IN}=23V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	14.4	15	15.6	V
		I_O= 5mA~1A, V_I= 17.5~30V*3	-10~+70°C	14.25	15	15.75	
Input line regulation	$V_{LINEREG}$	V_I= 17.5~30V	25°C	–	12	300	mV
		V_I= 20~26V		–	3	150	
Ripple rejection	G_{RIPPLE}	V_I= 18.5~28.5V, f= 120Hz	-10~+70°C	54	70	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	300	mV
		I_O= 250~750mA		–	4	150	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.019	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.0	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	90	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.3	8	mA
Bias current change	ΔI_{BIAS}	V_I= 17.5~30V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	230	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.1	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

LD6868 is working under V_{IN}=27V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	17.3	18	18.7	V
		I_O= 5mA~1A, V_I= 21~33V*3	-10~+70°C	17.1	18	18.9	
Input line regulation	$V_{LINEREG}$	V_I= 21~33V	25°C	–	15	360	mV
		V_I= 24~30V		–	5	180	
Ripple rejection	G_{RIPPLE}	V_I= 22~32V, f= 120Hz	-10~+70°C	53	69	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	360	mV
		I_O= 250~750mA		–	4	180	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.022	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.0	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	110	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.5	8	mA
Bias current change	ΔI_{BIAS}	V_I= 21~33V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	200	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.1	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6870 is working under V_{IN}=29V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	19.2	20	20.8	V
		I_O= 5mA~1A, V_I= 23~35V*3	-10~+70°C	19	20	21	
Input line regulation	$V_{LINEREG}$	V_I= 23~35V	25°C	–	18	400	mV
		V_I= 26~32V		–	7	200	
Ripple rejection	G_{RIPPLE}	V_I= 24~34V, f= 120Hz	-10~+70°C	51	66	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	15	400	mV
		I_O= 250~750mA		–	7	200	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.027	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.3	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	150	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.5	8	mA
Bias current change	ΔI_{BIAS}	V_I= 23~35V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	180	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.1	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

LD6874 is working under V_{IN}=33V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	23	24	25	V
		I_O= 5mA~1A, V_I= 27~38V*3	-10~+70°C	22.8	24	25.2	
Input line regulation	$V_{LINEREG}$	V_I= 27~38V	25°C	–	18	480	mV
		V_I= 30~36V		–	6	240	
Ripple rejection	G_{RIPPLE}	V_I= 28~38V, f= 120Hz	-10~+70°C	50	66	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	12	480	mV
		I_O= 250~750mA		–	4	240	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.028	–	Ω
Temperature coefficient of output voltage	V_T	I_O== 5mA	-10~+70°C	–	−1.5	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	170	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.6	8	mA
Bias current change	ΔI_{BIAS}	V_I= 27~38V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	150	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.1	–	A

Notes:
*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.
*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.
*3. The power dissipation is capable of 15W.

Electrical Characteristics (Cont')

LD6877 is working under V_{IN}=36V, I_{OUT}=500mA, at specified virtual junction temperature, unless specified.

Parameter	Symbol	Conditions*1	T_J	Min	Typ.	Max	Unit
Output voltage*2	V_O	–	25°C	25.9	27	28.1	V
		I_O= 5mA~1A, V_I= 30~40V*3	-10~+70°C	25.7	27	28.3	
Input line regulation	$V_{LINEREG}$	V_I= 30~40V	25°C	–	25	540	mV
		V_I= 33~39V		–	10	270	
Ripple rejection	G_{RIPPLE}	V_I= 30~40V, f= 120Hz	-10~+70°C	50	64	–	dB
Output load regulation	$V_{LOADREG}$	I_O= 5mA~1.5A	25°C	–	20	540	mV
		I_O= 250~750mA		–	9	270	
Output resistance	R_O	f= 1KHz	-10~+70°C	–	0.030	–	Ω
Temperature coefficient of output voltage	V_T	I_O= 5mA	-10~+70°C	–	−1.6	–	mV/°C
Output noise voltage	V_{NOISE}	f= 10~100KHz	25°C	–	200	–	μV
Dropout voltage	V_{DROP}	I_O= 1A	25°C	–	2.0	–	V
Bias current	I_{BIAS}	–	25°C	–	4.8	8	mA
Bias current change	ΔI_{BIAS}	V_I= 30~40V	-10~+70°C	–	–	1	mA
		I_O= 5mA~1A		–	–	0.5	
Short circuit output current	I_{OSHORT}	–	25°C	–	120	–	mA
Peak output current	I_{OPEAK}	–	25°C	–	2.1	–	A

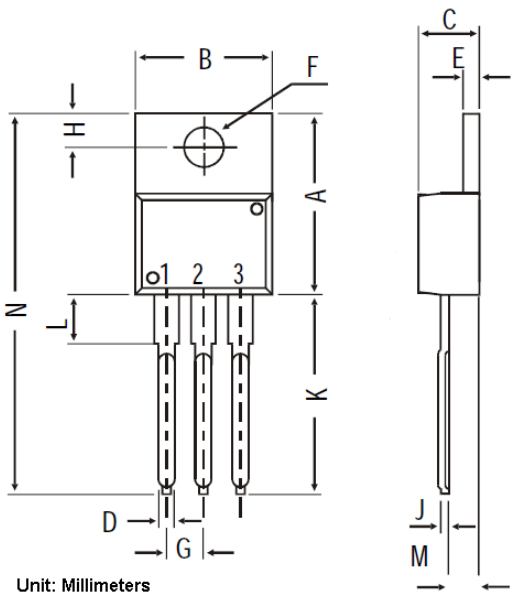
Notes:

*1. Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately.

*2. This specification applies only for dc power dissipation permitted by absolute maximum ratings.

*3. The power dissipation is capable of 15W.

Package Outline
TO-220:



Unit: Millimeters

Symbols	Minimum	Normal	Maximum
A	14.42	15.47	16.51
B	9.63	10.15	10.67
C	3.56	4.20	4.83
D	-	0.90	-
E	1.15	1.28	1.4
F	3.75	3.82	3.88
G	2.29	2.54	2.79
H	2.54	2.99	3.43
J	-	0.56	-
K	12.7	13.72	14.73
L	2.8	3.44	4.07
M	2.03	2.48	2.92
N	-	31.24	-

LD Tech Corporation

Tel: +886-3-567-8806
Fax: +886-3-567-8706
E-mail: sales@ldtech.com.tw
Website: www.ldtech.com.tw