

Features

- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- No External Components Required
- Output Voltage Offered in 2% Tolerance
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates RoHS Compliant. See ordering information)

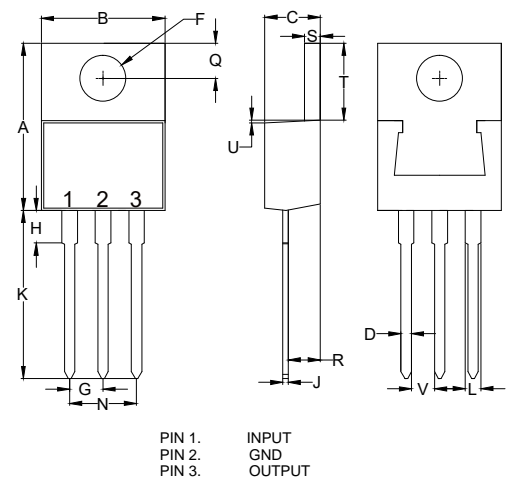
Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Output Current	I_o	1.0	A
Power Dissipation	P_D	15	W
Operating Junction Temperature $(\theta_{JA})^* \wedge$	T_{OPR}	-20~75	°C
Storage Temperature Range	T_{STG}	-55~125	°C

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Three-Terminal Positive Voltage Regulators

TO-220



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.420	9.65	10.67	
C	0.140	0.190	3.56	4.82	
D	0.020	0.045	0.51	1.14	
F	0.139	0.161	3.53	4.09	Φ
G	0.090	0.110	2.29	2.79	
H	-----	0.250	-----	6.35	
J	0.012	0.025	0.30	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.190	0.210	4.83	5.33	
Q	0.100	0.135	2.54	3.43	
R	0.080	0.115	2.04	2.92	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

Electrical Characteristics

 ($V_i=14V$, $I_o=500mA$, $0^{\circ}C < T_j < 125^{\circ}C$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^{\circ}C$	7.84	8.0	8.16	V
		$10.5V \leq V_i \leq 23V, 5mA \leq I_o \leq 1000mA$, $P_D=15W$	7.74	-	8.26	V
Load Regulation	ΔV_o	$5mA \leq I_o \leq 1500mA, T_j=25^{\circ}C$	-	12.0	160	mV
		$250mA \leq I_o \leq 750mA, T_j=25^{\circ}C$	-	4.0	80	mV
Line Regulation	ΔV_o	$10.5V \leq V_i \leq 25V, T_j=25^{\circ}C$	-	6.0	160	mV
		$11V \leq V_i \leq 17V, T_j=25^{\circ}C$	-	2.0	80	mV
Quiescent Current	I_q	$T_j=25^{\circ}C, I_o=0$	-	4.3	8.0	mA
Quiescent Current Change	ΔI_q	$10.5V \leq V_i \leq 25V$,	-	-	1.0	mA
		$5mA \leq I_o \leq 1000mA$	-	-	0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz, T_j=25^{\circ}C$	-	52	-	μV
Ripple Rejection	RR	$f=120Hz$	56	72	-	dB
Dropout Voltage	V_d	$T_j=25^{\circ}C, I_o=1.0A$	-	2	-	V
Output Short Circuit Current	R_o	$f=1.0KHz$	-	16	-	mohm
Output Short Circuit Current	I_{OS}	$T_j=25^{\circ}C$	-	450	-	mA
Peak Output Current	I_{opeak}	$T_j=25^{\circ}C$	-	2.2	-	A
Temperature Coefficient of Output Voltage	$\Delta V_o / \Delta T_j$	$0^{\circ}C \leq T_j \leq 125^{\circ}C, I_o=5.0mA$	-	1.8	-	$mV/^{\circ}C$

Representation Schematic Diagram

