

TO-220 Plastic-Encapsulate Transistors

FS7808CTG Three-terminal positive voltage regulator

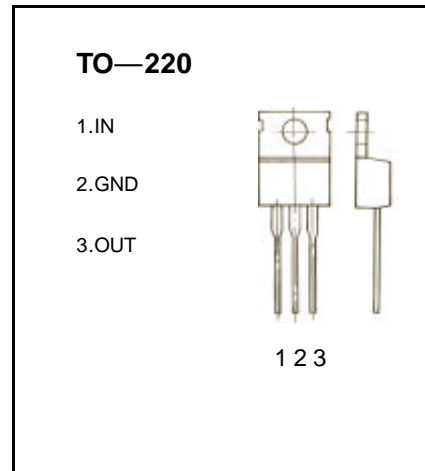
FEATURES

Maximum Output current

I_{OM} : 1.5 A

Output voltage

V_o : 8 V



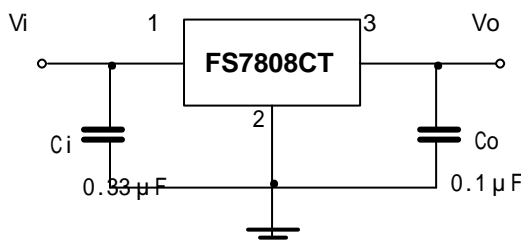
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

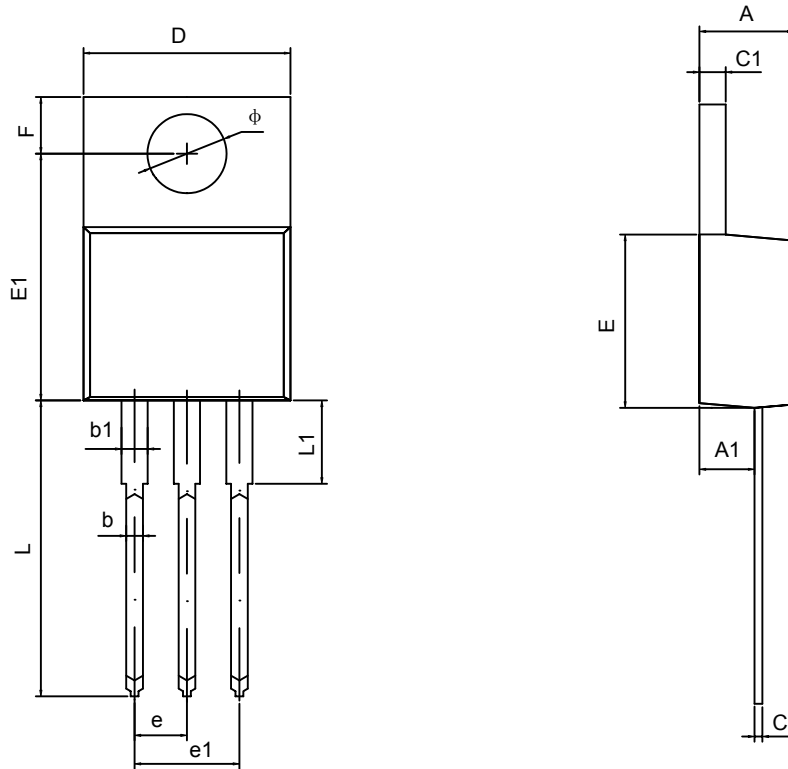
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	0—+125	
Storage Temperature Range	T_{STG}	-55—+150	

ELECTRICAL CHARACTERISTICS ($V_i=14V, I_o=500mA, 0 < T_j < 125$, $C_i=0.33 \mu F, C_o=0.1 \mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25$	7.7	8	8.3	V
		10.5V V_i 23V, $I_o=5mA-1A$, $P<15W$	7.6	8	8.4	V
Load Regulation	V_o	$T_j=25$, $I_o=5mA-1.5A$		12	160	mV
		$T_j=25$, $I_o=250mA-750mA$		4	80	mV
Line regulation	V_o	10.5V V_i 25V, $T_j=25$		6	160	mV
		11V V_i 17V, $T_j=25$		2	80	mV
Quiescent Current	I_q	$T_j=25$		4.3	8	mA
Quiescent Current Change	I_q	10.5V V_i 25V			1	mA
	I_q	5mA I_o 1A			0.5	mA
Output Noise Voltage	V_N	10Hz f 100KHz		52		μV
Ripple Rejection	RR	11.5V V_i 21.5V, f=120Hz, $T_j=25$	55	72		dB
Dropout Voltage	V_d	$T_j=25$, $I_o=1A$		2		V
Short Circuit Current	I_{sc}	$V_i=35V$, $T_a=25$		450		mA
Peak Current	I_{pk}	$T_j=25$		2.2		A

TYPICAL APPLICATION



TO-220-3L PACKAGE OUTLINE DIMENSIONS


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	1.176	0.184
A1	2.520	2.820	0.099	0.111
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	1.710	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540TYP		0.100TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
ϕ	3.790	3.890	0.149	0.153