Features

- Internal Thermal Overload Protection
- Low Dropout Voltage: 1.15V(typ.) at 800mA Output Current
- Moisture Sensitivity Level 3
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Low Dropout Linear Regulator

Maximum Ratings

- Thermal Resistance: 100°C/W Junction to Ambient
- Storage Temperature Range: -55°C to +150°C
- Operating Junction Temperature : 150°C

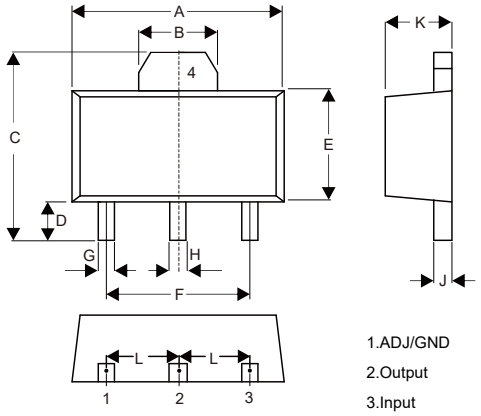
Parameter	Symbol	Value	Unit
Input Voltage	V_I	20	V
ESD Voltage (Machine Model)	V_{ESD}	400	V

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Input Voltage	V_I	15	V
Operating Junction Temperature	T_j	-25 ~125	°C

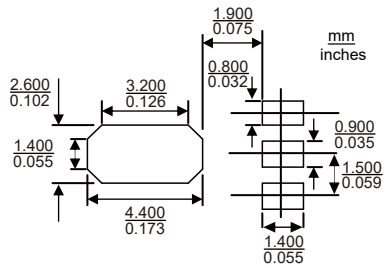
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOT-89



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP.
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP.
G	0.013	0.020	0.33	0.52	
H	0.015	0.021	0.38	0.53	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP.

Suggested Solder Pad Layout



Electrical Characteristics(T_a=25 ℃ Unless Otherwise Specified)

Parameter	Symbol	Part Number	Test Conditions	Min	Typ	Max	Unit
Reference Voltage	V_{ref}	MCA1117C-ADJ	10mA≤Iout≤800mA , Vin=3.25V	1.225	1.25	1.275	V
Output Voltage	Vout	MCA1117C-1.2	0≤Iout≤800mA , Vin=3.2V	1.176	1.2	1.224	V
		MCA1117C-1.8	0≤Iout≤800mA , Vin=3.8V	1.764	1.8	1.836	V
		MCA1117C-2.5	0≤Iout≤800mA , Vin=4.5V	2.45	2.5	2.55	V
		MCA1117C-2.85	0≤Iout≤800mA , Vin=4.85V	2.793	2.85	2.907	V
		MCA1117C-3.3	0≤Iout≤800mA , Vin=5.3V	3.234	3.3	3.366	V
		MCA1117C-5.0	0≤Iout≤800mA , Vin=7.0V	4.9	5	5.1	V
Line Regulation	△Vout	MCA1117C-1.2	Iout=10mA, 2.7V≤Vin≤10V	-	0.03	0.2	%/V
		MCA1117C-ADJ	Iout=10mA, 2.75V≤Vin≤12V	-	0.03	0.2	%/V
		MCA1117C-1.8	Iout=10mA, 3.3V≤Vin≤12V	-	0.03	0.2	%/V
		MCA1117C-2.5	Iout=10mA, 4.0V≤Vin≤12V	-	0.03	0.2	%/V
		MCA1117C-2.85	Iout=10mA, 4.35V≤Vin≤12V	-	0.03	0.2	%/V
		MCA1117C-3.3	Iout=10mA, 4.8V≤Vin≤12V	-	0.03	0.2	%/V
		MCA1117C-5.0	Iout=10mA, 6.5V≤Vin≤12V	-	0.03	0.2	%/V
Load Regulation	△Vo	MCA1117C-1.2	Vin =2.7V, 10mA≤Iout≤800mA	-	2	8	mV
		MCA1117C-ADJ	Vin =2.75V, 10mA≤Iout≤800mA	-	2	8	mV
		MCA1117C-1.8	Vin =3.3V, 10mA≤Iout≤800mA	-	3	12	mV
		MCA1117C-2.5	Vin =4.0V, 10mA≤Iout≤800mA	-	4	16	mV
		MCA1117C-2.85	Vin =4.35V, 10mA≤Iout≤800mA	-	5	20	mV
		MCA1117C-3.3	Vin =4.8V, 10mA≤Iout≤800mA	-	6	24	mV
		MCA1117C-5.0	Vin =6.5V, 10mA≤Iout≤800mA	-	9	36	mV
Dropout Voltage	V_{drop}		Iout =100mA	-	1.2	1.3	V
			Iout=800mA	-	1.3	1.5	V
Minimum Load Current	I_{min}	MCA1117C-ADJ		-	2	10	mA
Quiescent Current	I_q	MCA1117C-1.2	Vin=10V	-	2	5	mA
		MCA1117C-1.8	Vin=12V	-	2	5	mA
		MCA1117C-2.5	Vin=12V	-	2	5	mA
		MCA1117C-2.85	Vin=12V	-	2	5	mA
		MCA1117C-3.3	Vin=12V	-	2	5	mA
		MCA1117C-5.0	Vin=12V	-	2	5	mA
Adjustment Pin Current	I_{adj}	MCA1117C-ADJ	Vin=5V,10mA≤Iout≤800mA	-	55	120	μA
I_{adj} change	I_{change}	MCA1117C-ADJ	Vin=5V,10mA≤Iout≤800mA	-	0.2	10	μA
Temperature Coefficien	ΔV/ΔT		V_o=10V F=100Hz, C_{ADJ}=10μF	-	±100	-	ppm

Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:1Kpcs/Reel

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