

/ Descriptions

SOT-89

Voltage Regulator in a SOT-89 Plastic Package.

/ Features

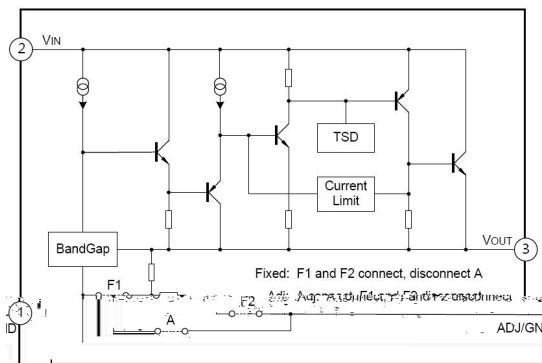
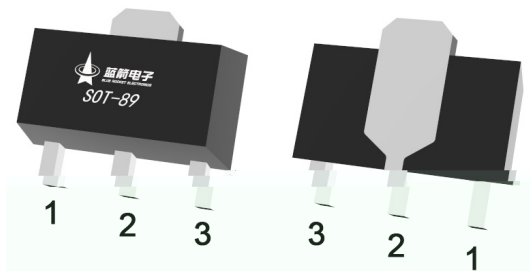
800mA,

AEC-Q100

High efficiency, Low dropout voltage.output current up to 800mA, internal current and thermal limit, Qualified to AEC-Q100 Standards for High Reliability, HF Product.

/ Applications

Voltage Regulator, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit or Application Circuit**/ Pinning**

Pin1 GND/ADJ Pin2 VOUT Pin3 VIN

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Input voltage	V_I	15	V
Storage temperature range	T_{stg}	-40 150	

/ Electrical Characteristics($T_a=25$)

Parameter	Symbol	Type	Test Conditions	Min	Typ	Max	Unit
Reference Voltage	V_{ref}	BRLD1117TQ- Adj	$V_{in}-V_o=2V$ $T_j=25$ $I_o=10mA$	1.225	1.25	1.275	V
			$10mA$ I_o 800mA $1.4V$ ($V_{in}-V_o$) 10V	1.225	1.25	1.275	
Output Voltage	V_o	BRLD1117TQ-1.2	$V_{in}=3.2V$ $T_j=25$ $I_o=10mA$	1.176	1.2	1.224	V
			$10mA$ I_o 800mA, $3V$ V_{in} 8V	1.176	1.2	1.224	
		BRLD1117TQ-1.8	$V_{in}=3.8V$ $T_j=25$ $I_o=10mA$	1.764	1.8	1.836	V
			0 I_o 800mA, $3.3V$ V_{in} 8V	1.764	1.8	1.836	
		BRLD1117TQ-2.5	$V_{in}=4.5V$ $T_j=25$ $I_o=10mA$	2.45	2.5	2.55	V
			0 I_o 800mA, $3.9V$ V_{in} 10V	2.45	2.5	2.55	
		BRLD1117TQ-3.3	$V_{in}=5.3V$ $T_j=25$ $I_o=10mA$	3.234	3.3	3.366	V
			0 I_o 800mA, $4.75V$ V_{in} 10V	3.234	3.3	3.366	
		BRLD1117TQ-5.0	$V_{in}=7V$ $T_j=25$ $I_o=10mA$	4.9	5	5.1	V
			0 I_o 800mA, $6.5V$ V_{in} 15V	4.9	5	5.1	
Load Regulation	V_o	BRLD1117TQ-Adj	$V_{in}-V_o=3V$ $10mA$ I_o 800mA			30	mV
		BRLD1117TQ-1.2	$V_{in}=3V$ $10mA$ I_o 800mA			30	mV
		BRLD1117TQ-1.8	$V_{in}=3.3V$ $0mA$ I_o 800mA			30	mV
		BRLD1117TQ-2.5	$V_{in}=3.9V$ $0mA$ I_o 800mA			30	mV
		BRLD1117TQ-3.3	$V_{in}=4.75V$ $0mA$ I_o 800mA			30	mV
		BRLD1117TQ-5.0	$V_{in}=6.5V$ $0mA$ I_o 800mA			30	mV

Parameter	Symbol	Type	Test Conditions	Min	Typ	Max	Unit
Line Regulation	Vo	BRLD1117TQ-Adj	Io=10mA 1.5V (Vin-Vo) 13.75V			23	mV
		BRLD1117TQ-1.2	3V Vin 8.0V Io=0mA			18	mV
		BRLD1117TQ-1.8	3.3V Vin 8.0V Io=0mA			31	mV
		BRLD1117TQ-2.5	3.9V Vin 10V Io=0mA			40	mV
		BRLD1117TQ-3.3	4.75V Vin 15V Io=0mA			48	mV
		BRLD1117TQ-5.0	6.5V Vin 15V Io=0mA			55	mV
Operating Input Voltage	Vin	BRLD1117TQ-Adj				15	V
		BRLD1117TQ-1.2				10	
		BRLD1117TQ-1.8				10	
		BRLD1117TQ-2.5	Io=100mA			15	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Type	Test Conditions	Min	Typ	Max	Unit
Supply Voltage Rejection	SVR	BRLD1117TQ-Adj	Io=40mA f=120Hz, Tj=25 Vin-Vo=3V, Vripple=1Vpp	60	75		dB
		BRLD1117TQ-1.2					
		BRLD1117TQ-1.8					
		BRLD1117TQ-2.5					
		BRLD1117TQ-3.3					
		BRLD1117TQ-5.0					
Dropout Voltage	Vd	BRLD1117TQ-Adj	Io=100mA Io=500mA Io=800mA		1.00 1.05 1.10	1.10 1.15 1.20	V
		BRLD1117TQ-1.2					
		BRLD1117TQ-1.8					
		BRLD1117TQ-2.5					
		BRLD1117TQ-3.3					
		BRLD1117TQ-5.0					
Thermal Regulation		BRLD1117TQ-Adj	Ta=25 30ms Pulse		0.01	0.1	%W
		BRLD1117TQ-1.2					
		BRLD1117TQ-1.8					
		BRLD1117TQ-2.5					
		BRLD1117TQ-3.3					
		BRLD1117TQ-5.0					

/ Typical Application Circuit

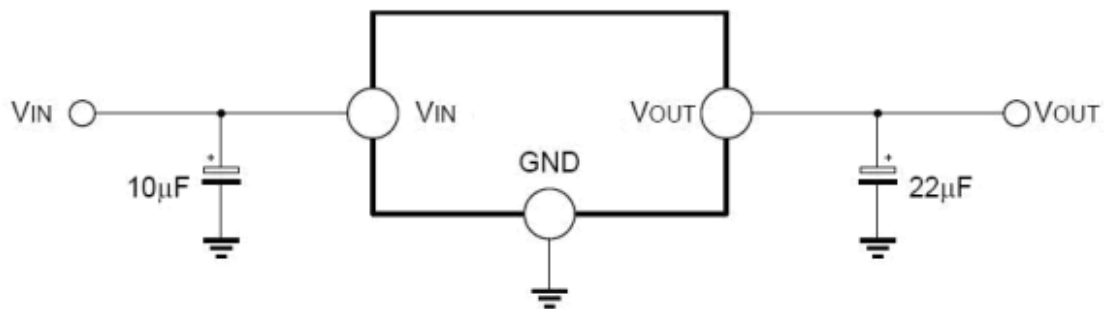


图 1.典型固定输出电压

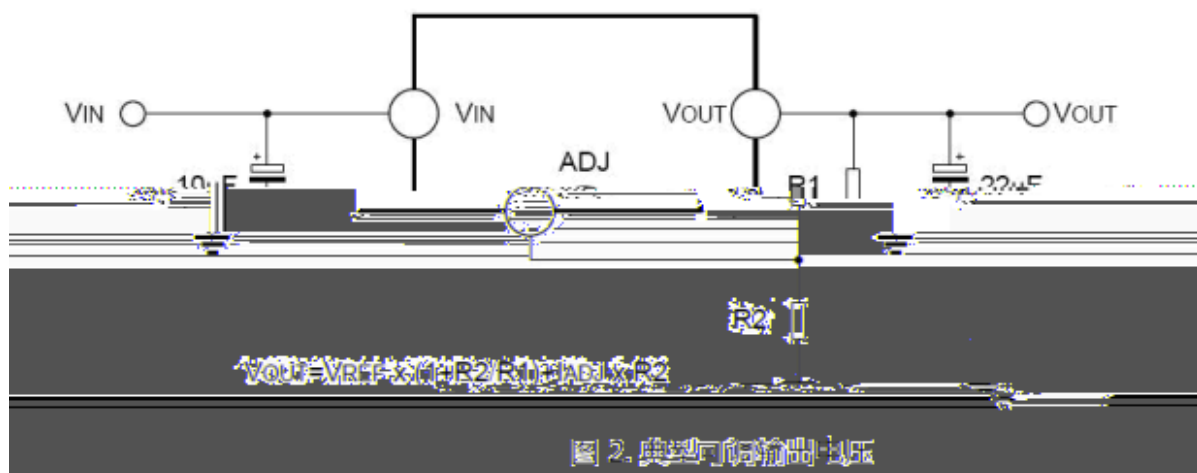
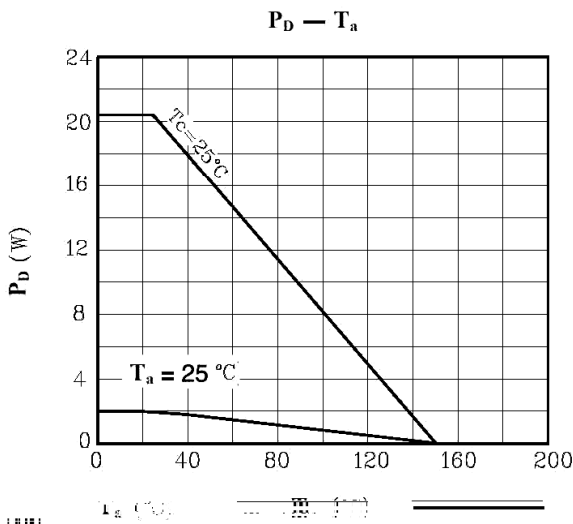
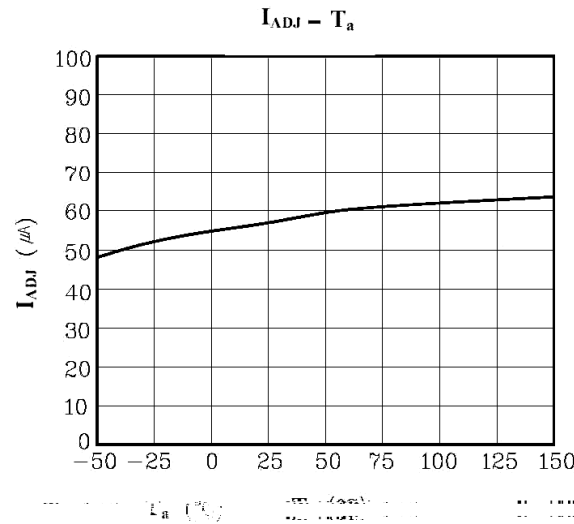
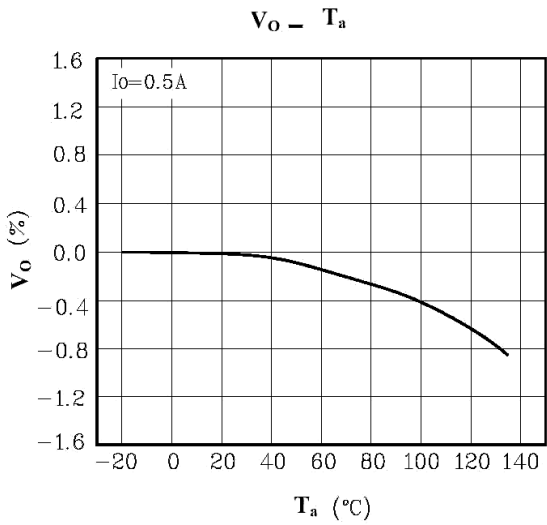
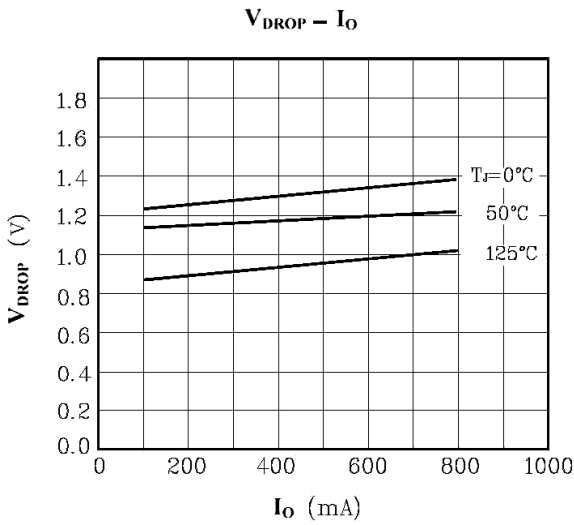
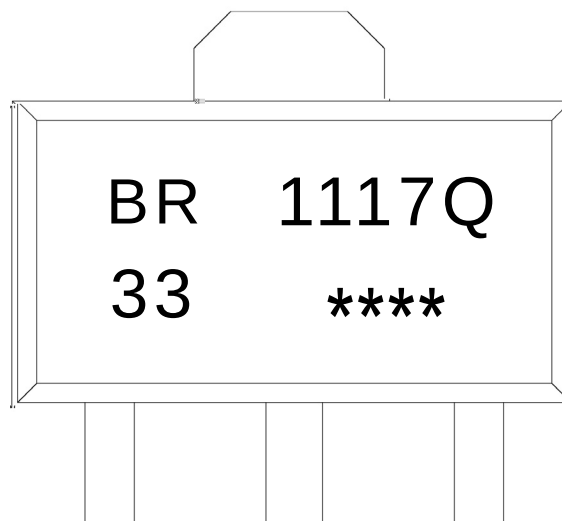


图 2.典型可调输出电压

/ Electrical Characteristic Curve



/ Marking Instructions



BR

1117

Q

33: 3.3V

Note:

BR: Company Code

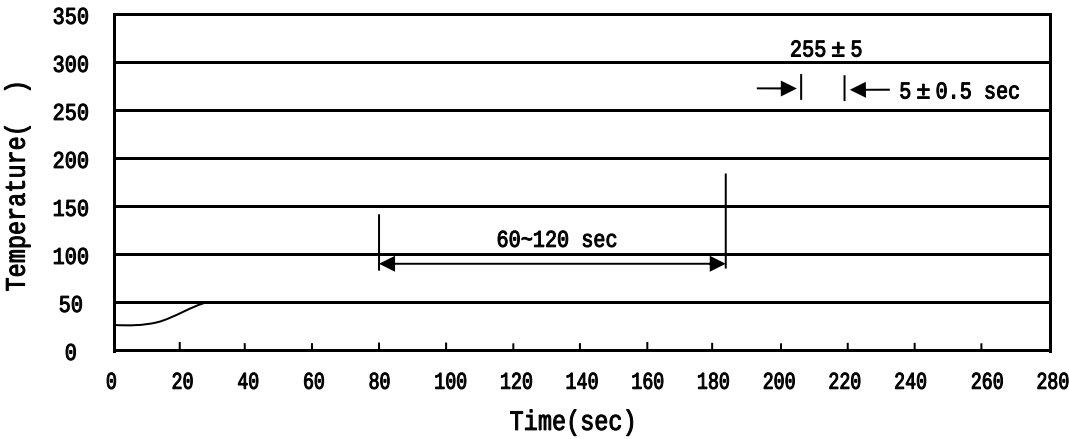
1117: Product Type Code

Q: Automobile halogen-free product Code

33: On Behalf 3.3V

****: Lot No. Code, code change with Lot No

() /



- Note:
- 1

150 200

60 120sec;

1.Preheating:150~200 °C, Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5 °C, Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	6	42,000	7 ×12	180×120×180	390×385×205

/ Notices