

BRLD1117TQ

Rev.A Oct.-2023

/ Descriptions

SOT-89 Voltage Regulator in a SOT-89 Plastic Package.

/ Features

800mA,

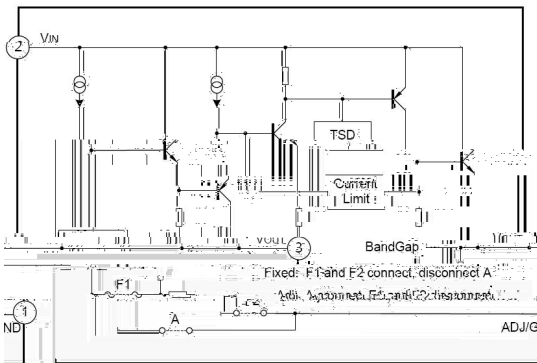
AEC-Q100

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.

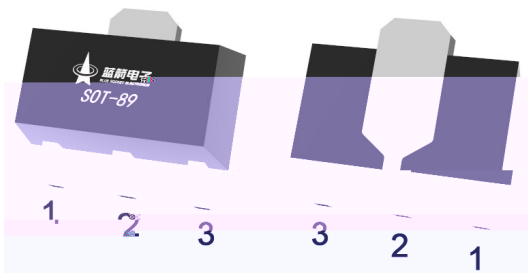
/ Applications

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(Ta=25)

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

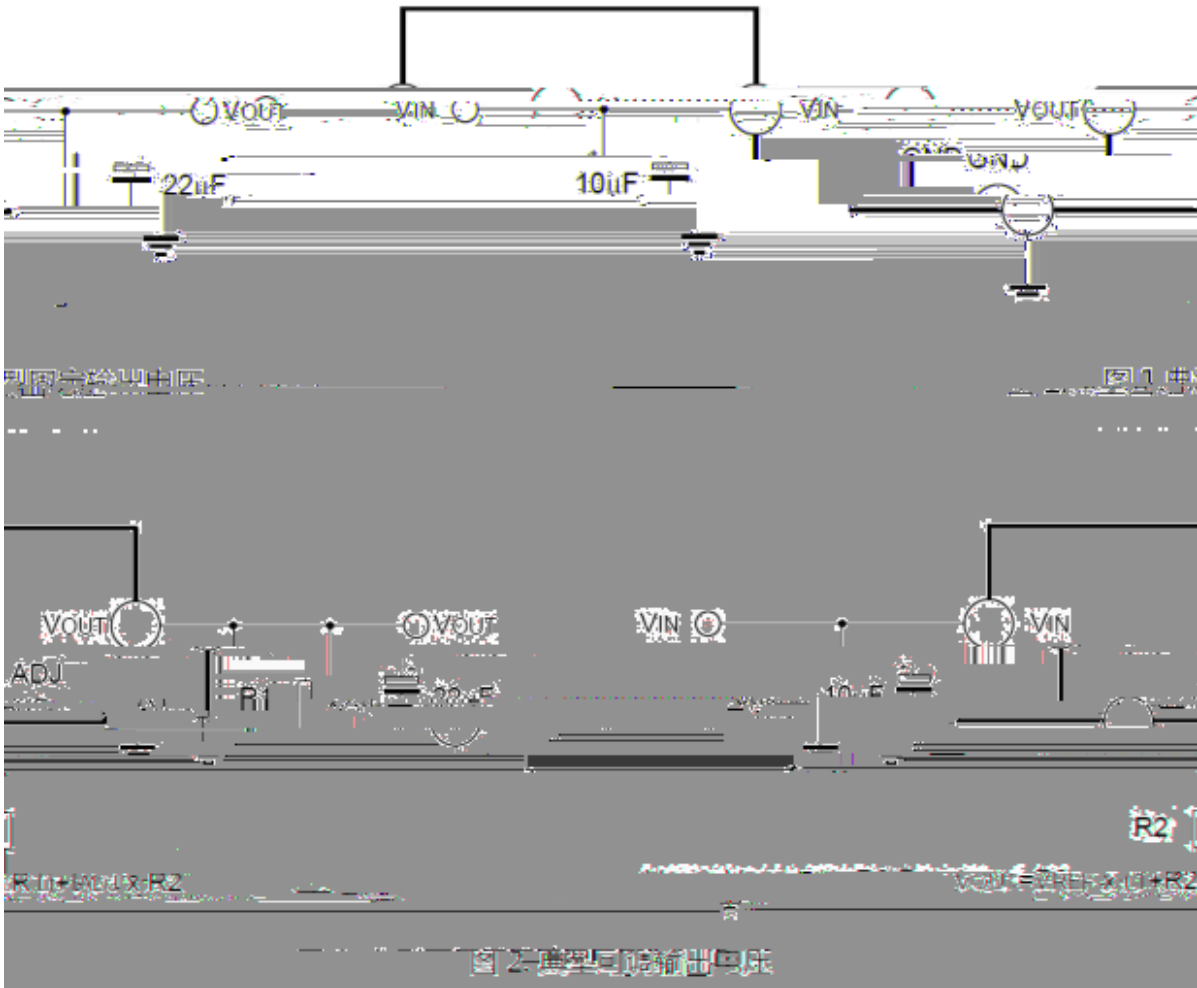
/ Electrical Characteristics(Ta=25)

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

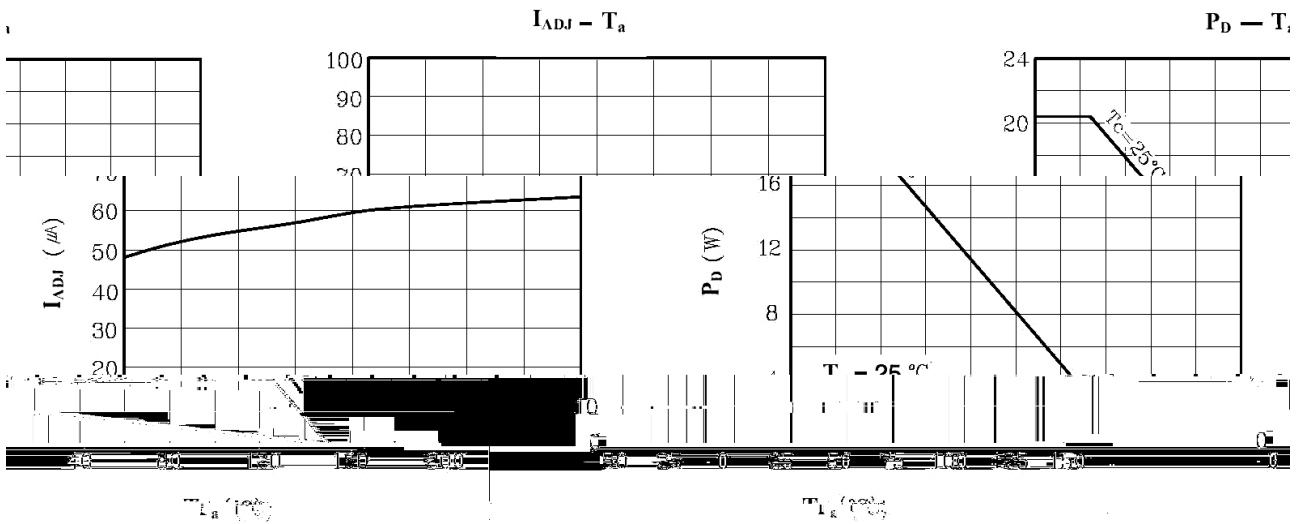
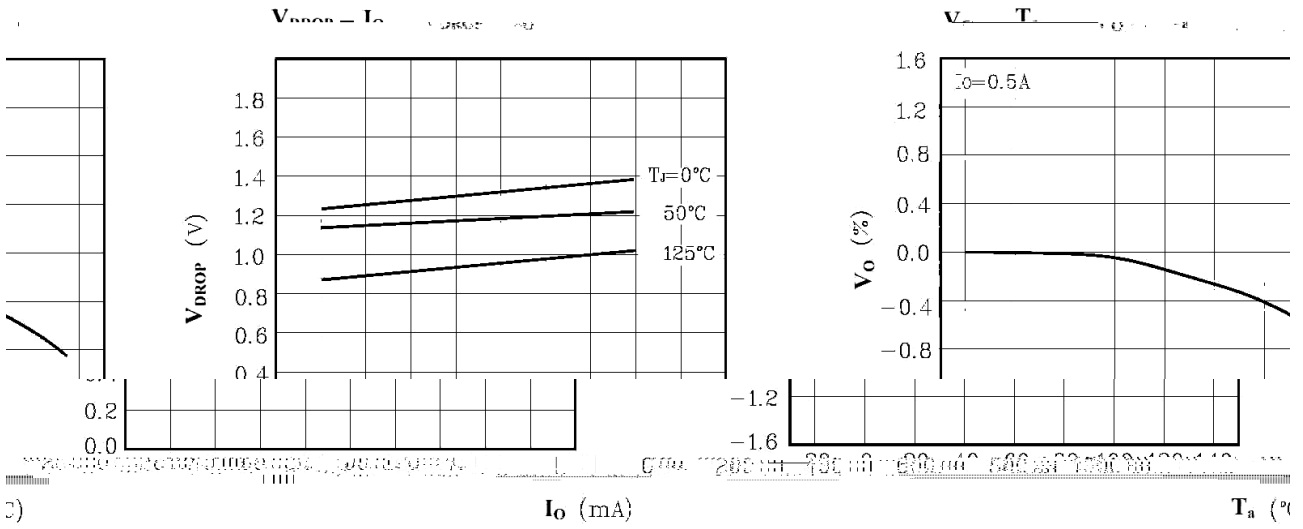
Parameter	Symbol	Type	Test Conditions	Min	Typ	Max	Unit
		BRLD1117TQ-Adj	$I_o=10\text{mA}$ $1.5\text{V} (V_{in}-V_o) \ 13.75\text{V}$			23	mV

Line Regulation V_o

/ Typical Application Circuit

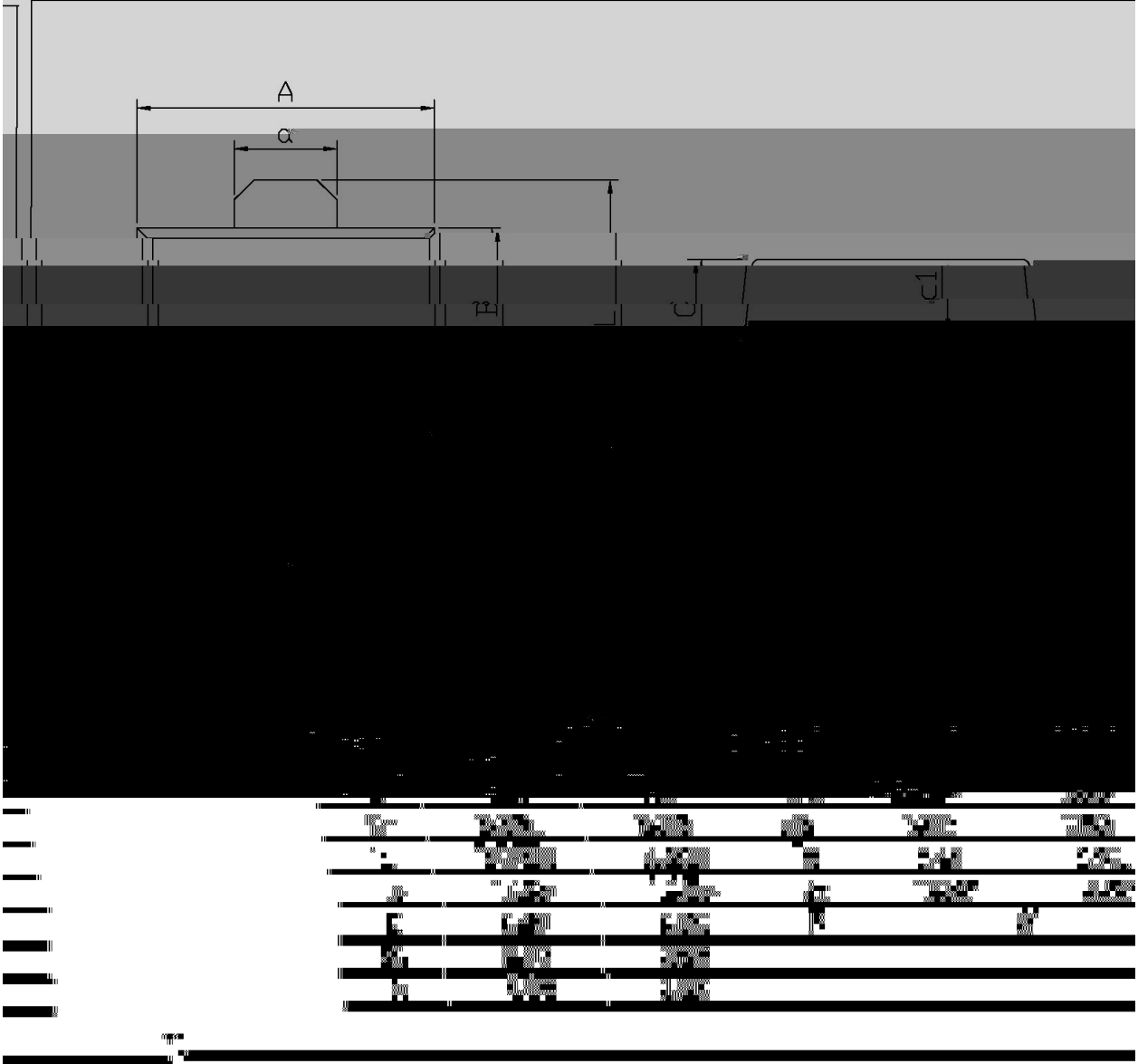


/ Electrical Characteristic Curve

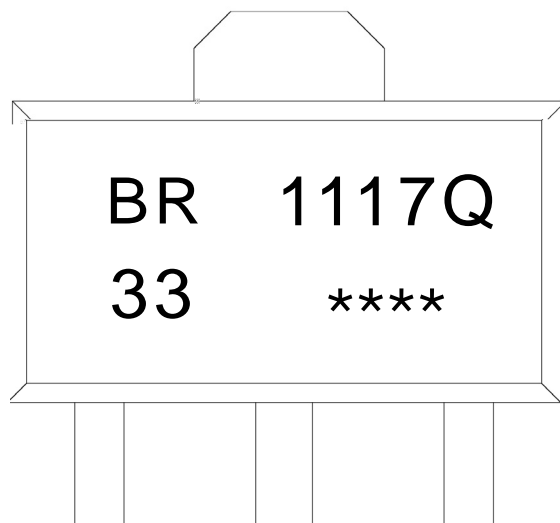


301-89

单位: mm



/ Marking Instructions



BR

1117

Q

33: 3.3V

Note:

BR: Company Code

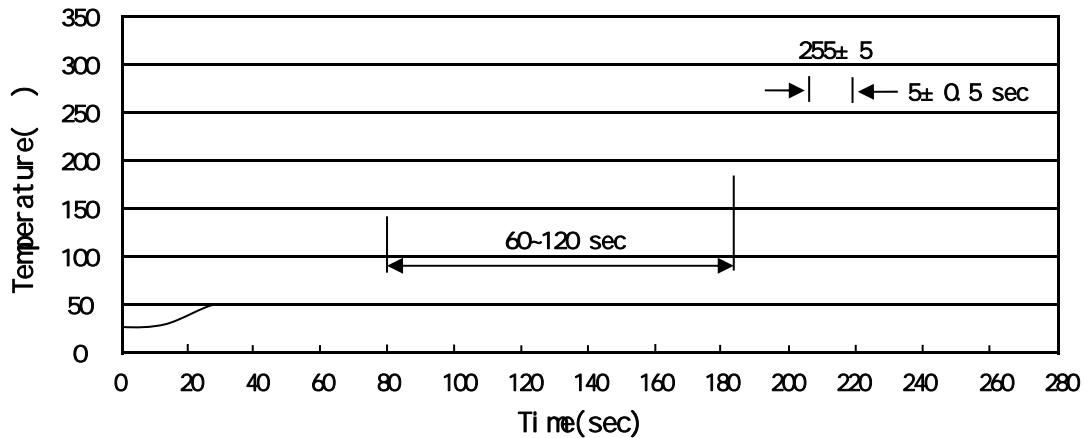
1117: Product Type Code

Q: Automobile halogen-free product Code

33: On Behalf 3.3V

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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1 150 200 60 120sec; 1.Preheating:150~200 , Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3 2 10 /sec. 3. Cooling Speed: 2~10 /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