

## / Descriptions

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

## / Features

800mA,

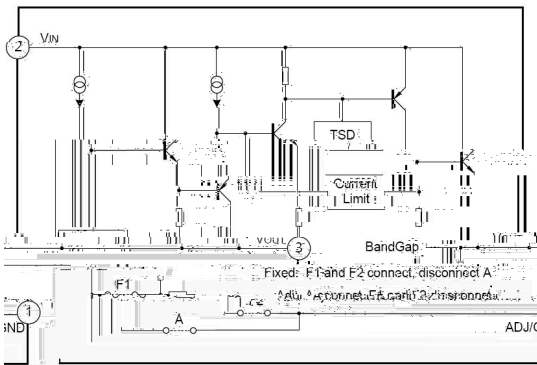
AEC-Q100

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.

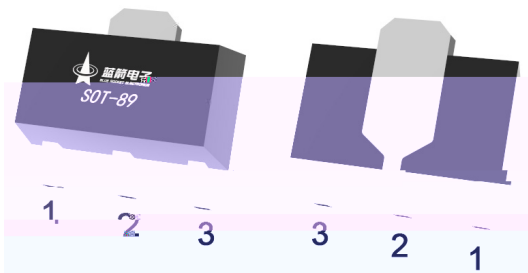
## / Applications

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	$V_{ref}$	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		

# BRLD1117TQ

Rev.A Oct.-2023



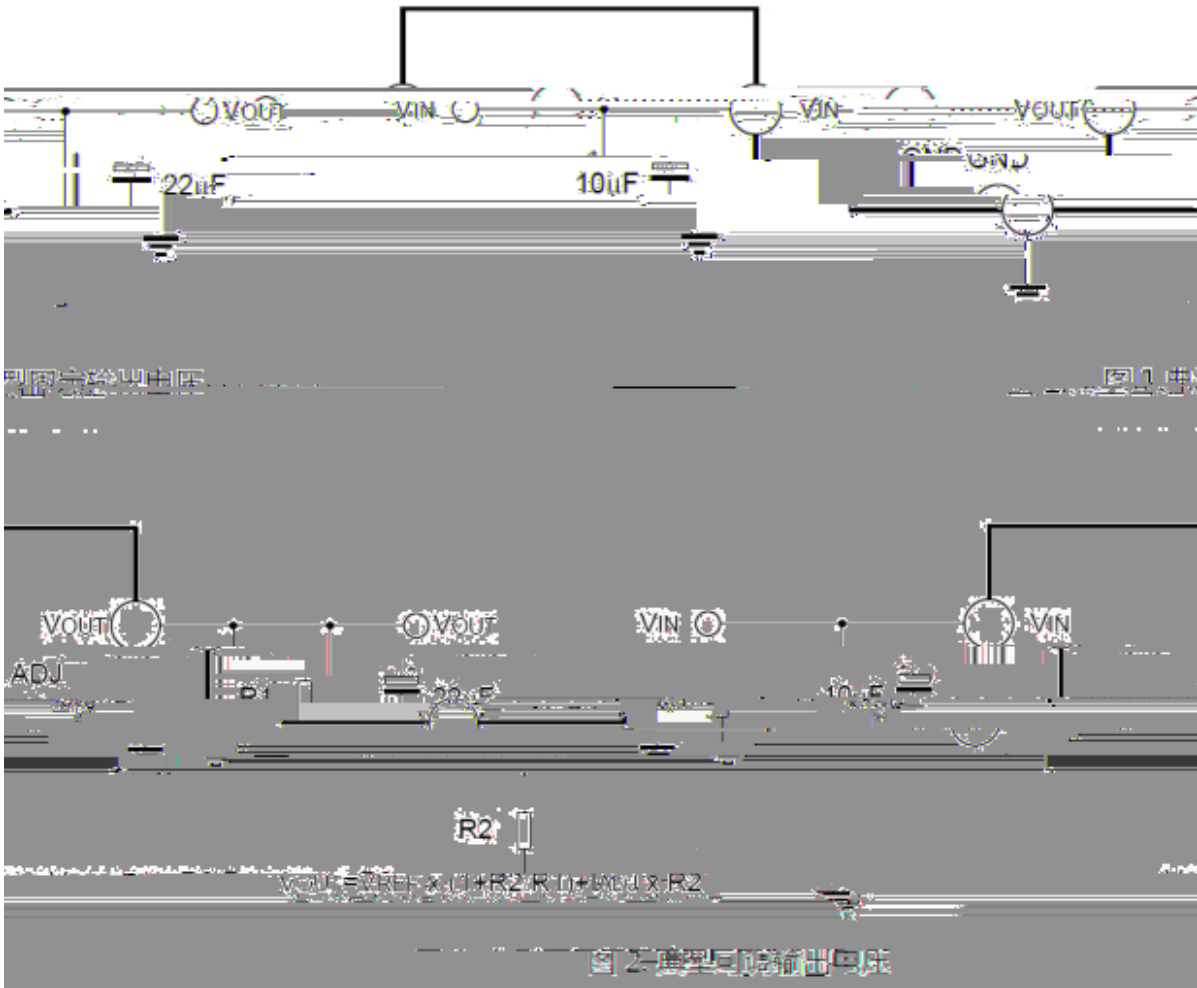
DATA SHEET

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

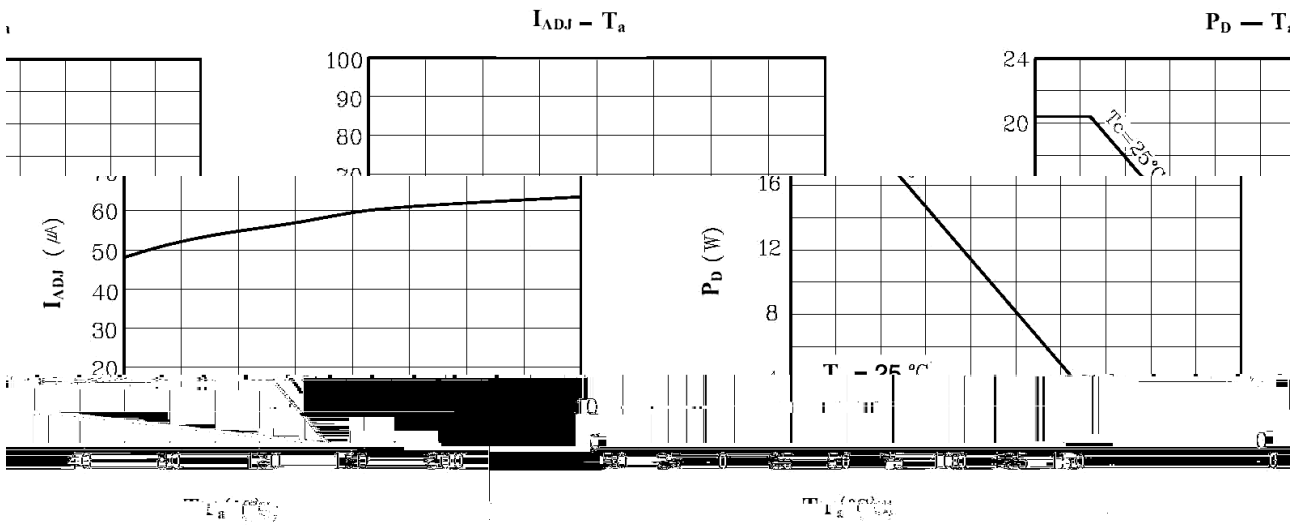
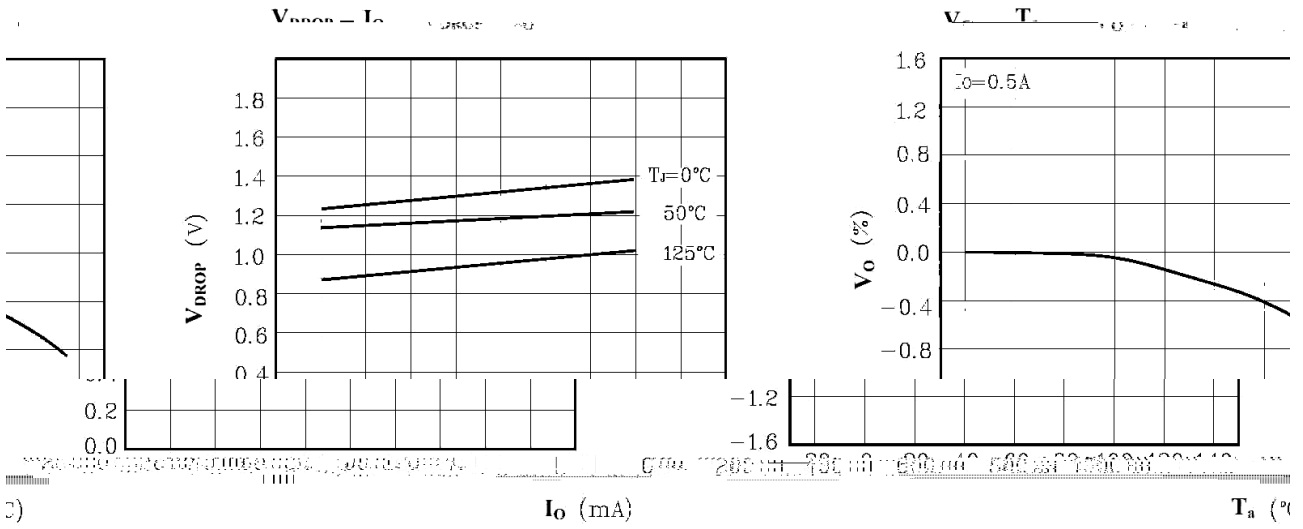
Line Regulation  $V_o$



/ Typical Application Circuit

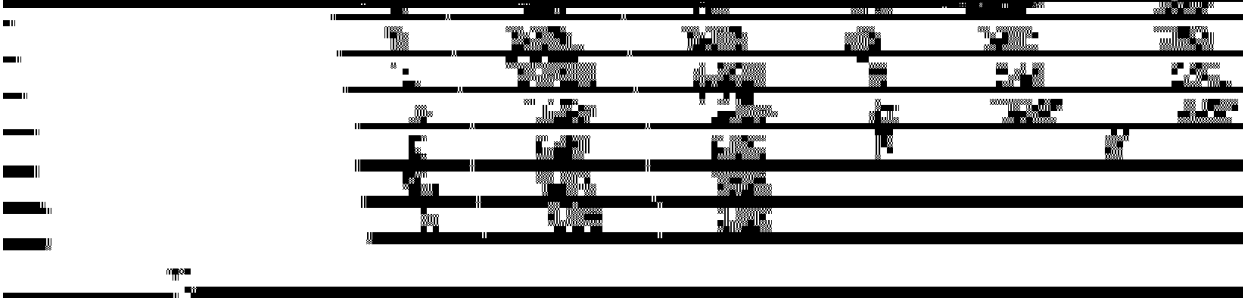
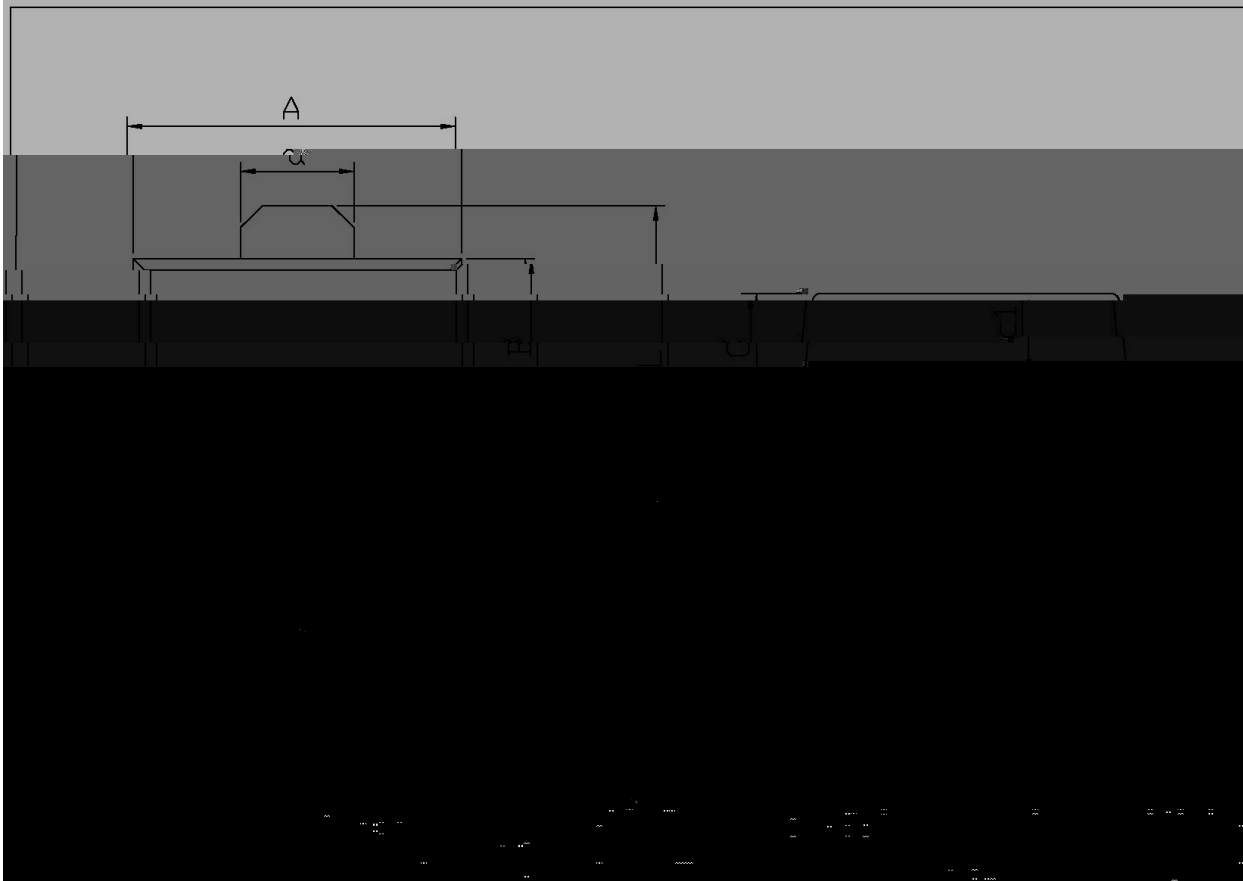


/ Electrical Characteristic Curve

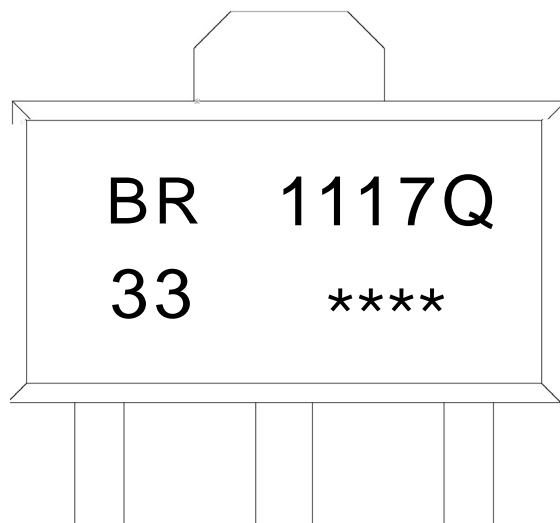


SOT-89

单位: mm



**/ Marking Instructions**



BR

1117

Q

33: 3.3V

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Note:

BR: Company Code

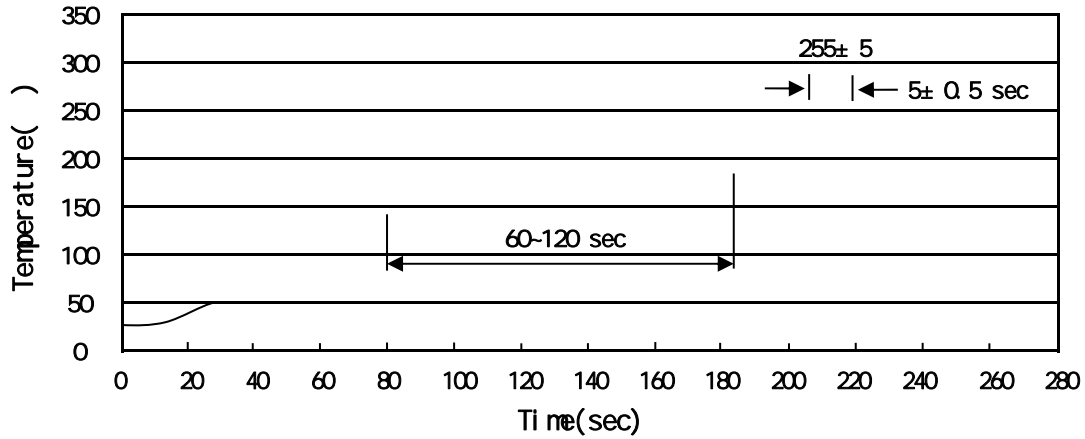
1117: Product Type Code

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**