

# BRC07550TAQ

Rev.A Aug.-2022

## / Descriptions

SOT-89

Low dropout linear regulator in a SOT-89 Plastic Package.

## / Features

30V

2.5 $\mu$ A

$\pm 2\%$

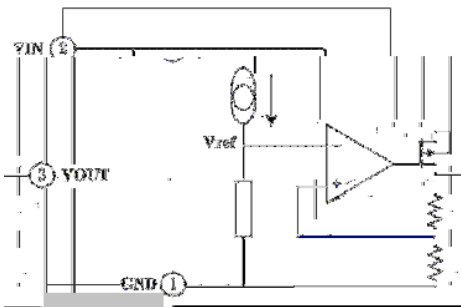
AEC-Q100

Low power consumption, Low voltage drop, Small temperature drift coefficient, High input voltage up to 30V, The static current 2.5 $\mu$ A, The output voltage accuracy:  $\pm 2\%$ , Qualified to AEC-Q100 Standards for High Reliability, HF Product.

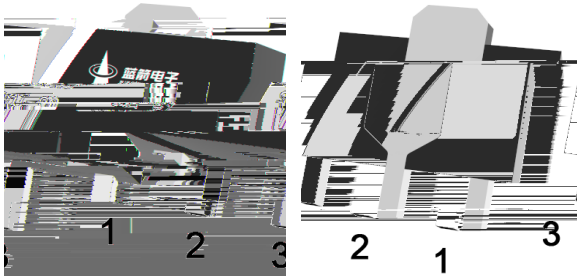
## / Applications

For use in power equipment, Communication equipment, Audio and video equipment, Meet the stringent requirements of automotive applications.

## / Equivalent Circuit



## / Pinning



PIN1 GND

PIN 2 VIN

PIN 3 VOUT

## / Marking

/ See Marking Instructions.

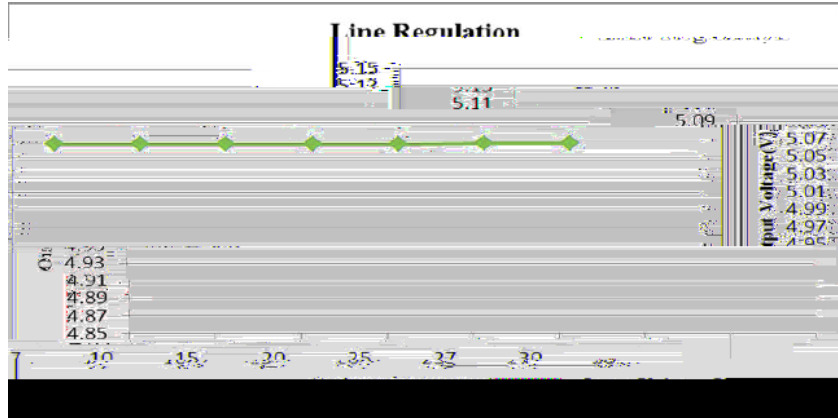
Parameter	Symbol	Rating	Unit
Working Voltage	$V_{IN}$	-0.3~33	V
Thermal Resistance	$R_{JA}$	200	/W
Power Consumption	$P_W$	500	mW
Storage Temperature	$T_{STG}$	-50~+125	
Working Temperature	$T_A$	-40~+85	

Notes: If the device operating conditions over the maximum rating of the above-mentioned conditions, may cause permanent damage to the device. The above parameters is only part of the operating conditions the maximum, we do not recommend the device running outside the scope of this specification. If the device to work long hours under the condition of absolute maximum limit, its stability may be affected.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
The Output Voltage	$V_{OUT}$	$V_{IN}=7.0V, I_{OUT}=10mA$	4.90	5.00	5.10	V
The Output Current	$I_{OUT}$	$V_{IN}=7.0V$	100	150		mA
Load Regulation	$V_{OUT}$	$V_{IN}=7.0V$ $1mA \leq I_{OUT} \leq 150mA$		25	60	mV
Low Dropout	$V_{DIF}$	$I_{OUT}=1mA, V_{OUT}=2\%$		25	55	mV
Static Power	$I_{SS}$	$V_{IN}=7.0V$		2.5	4.0	$\mu A$
The Input Voltage	$V_{IN}$	$V_{IN} \leq 30V$ $I_{OUT}=10mA$			0.2	%/V

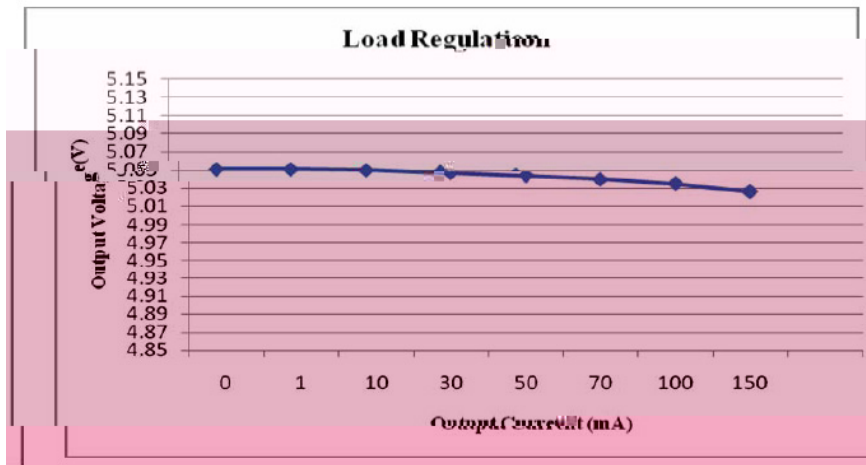
**/ Electrical Characteristic Curve**

/ The input voltage and output voltage



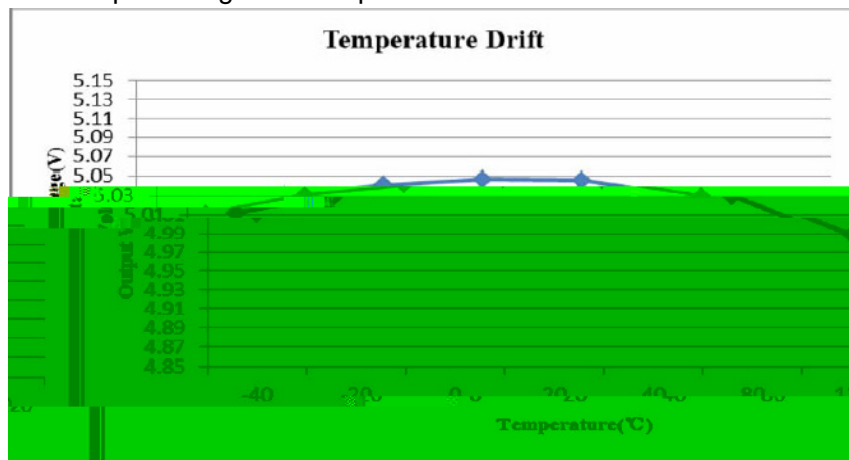
$I_{OUT}=10mA$

/ The output voltage and load current



$V_{IN}=7.0V$

/ The output voltage and temperature

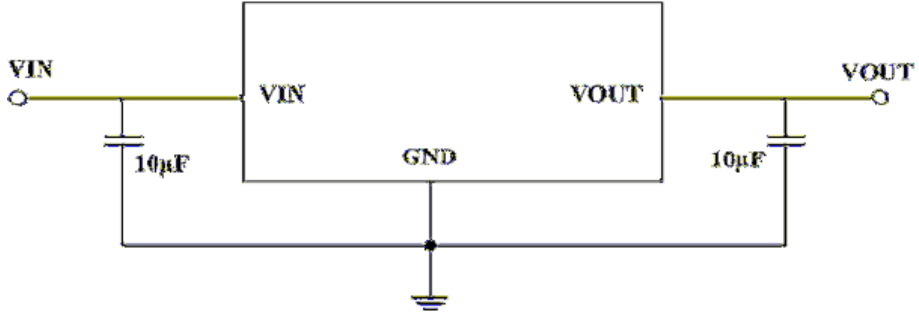


$V_{IN}=7.0V$

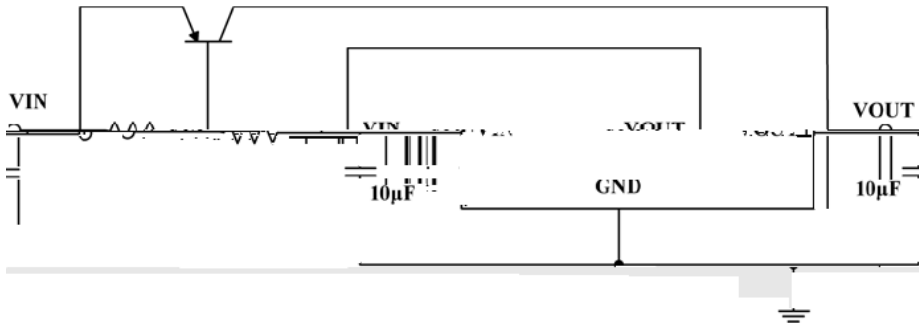
$I_{OUT}=10mA$

**/ Typical Application Circuit**

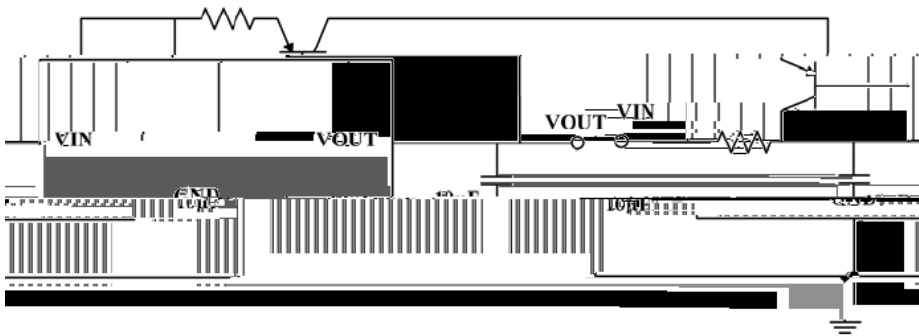
/ Basic Application



/ High Output Current Voltage Regulator

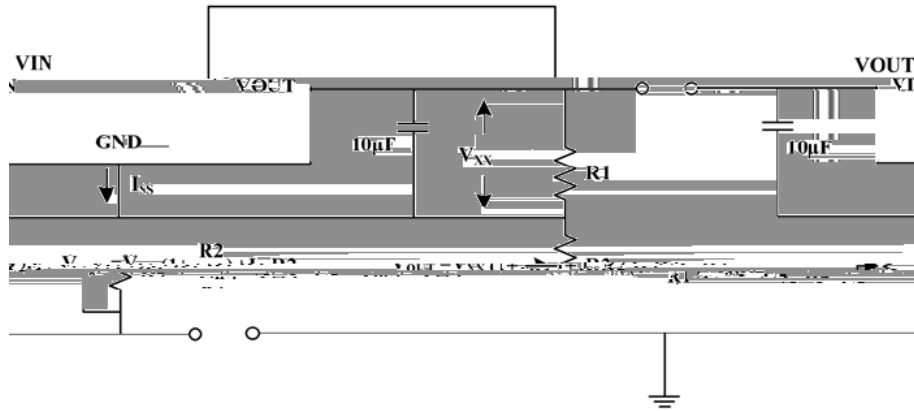


/ Short-Circuit Protection

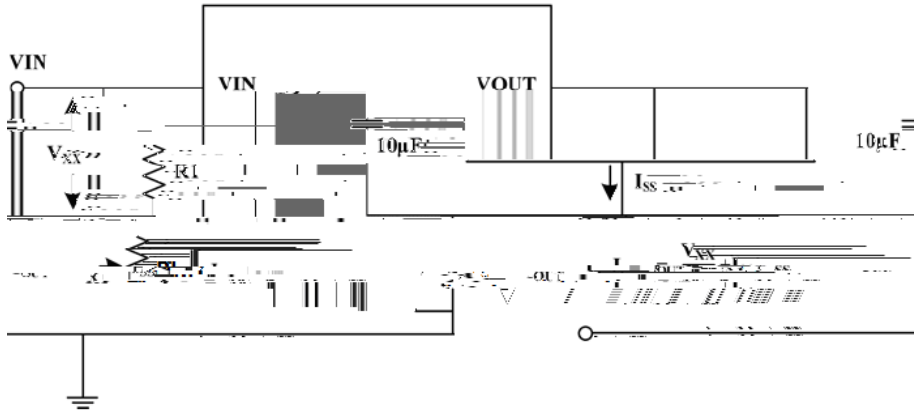


**/ Typical Application Circuit**

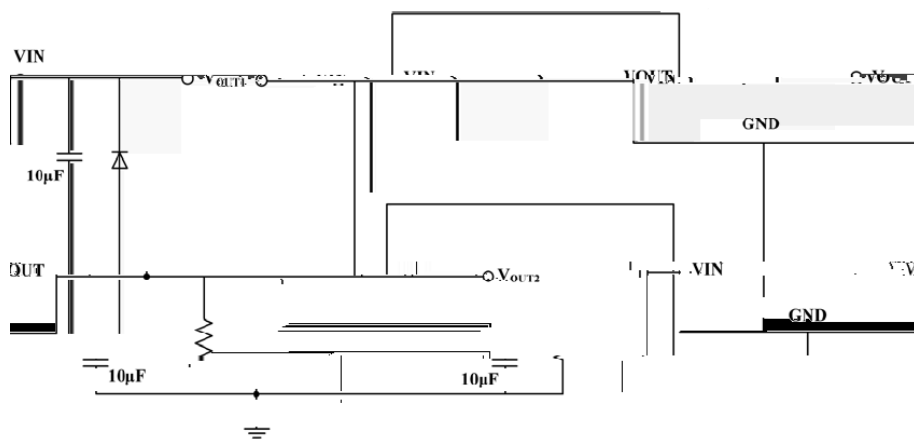
/ Circuit for Increasing Output Voltage



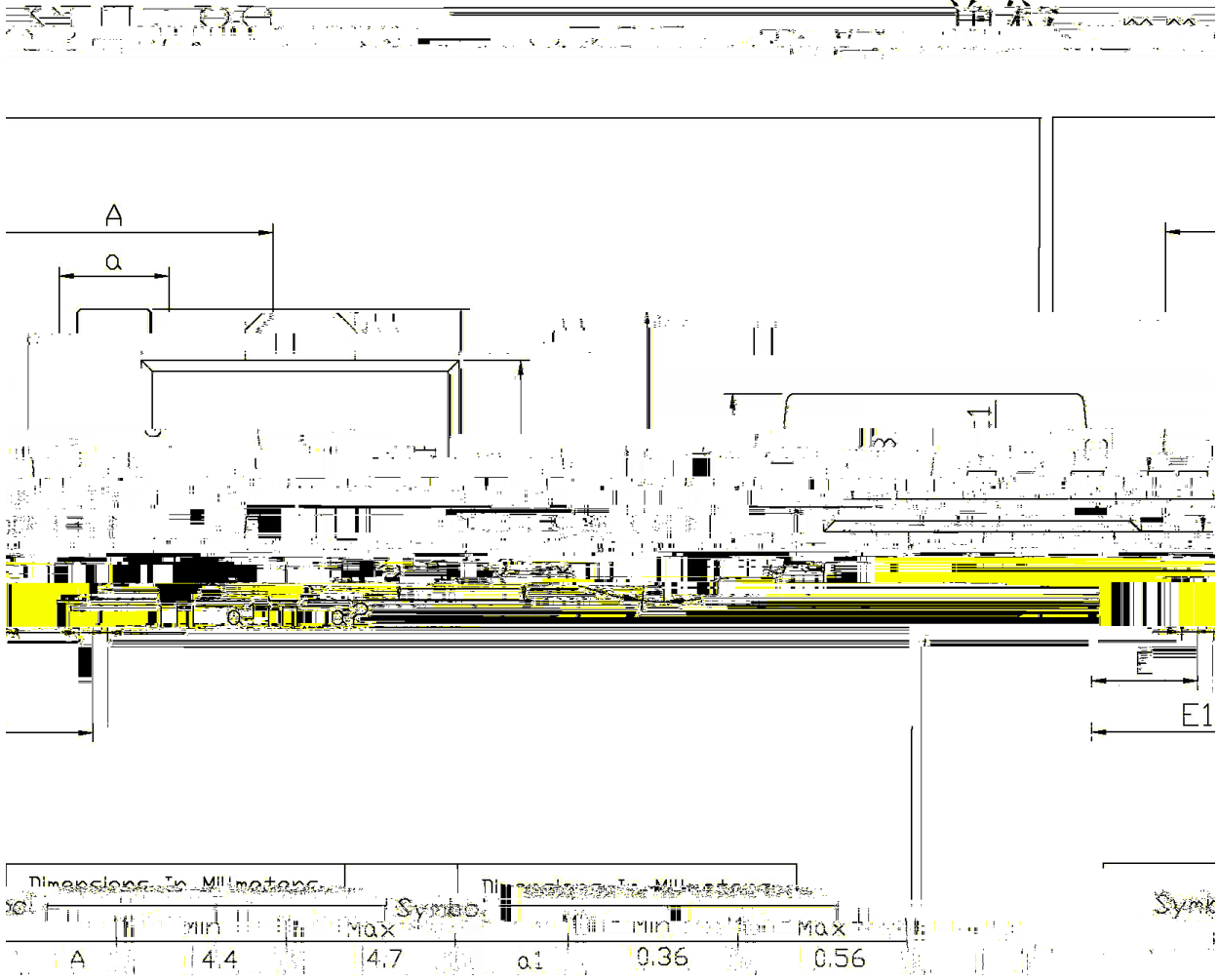
/ Constant Current Regulator



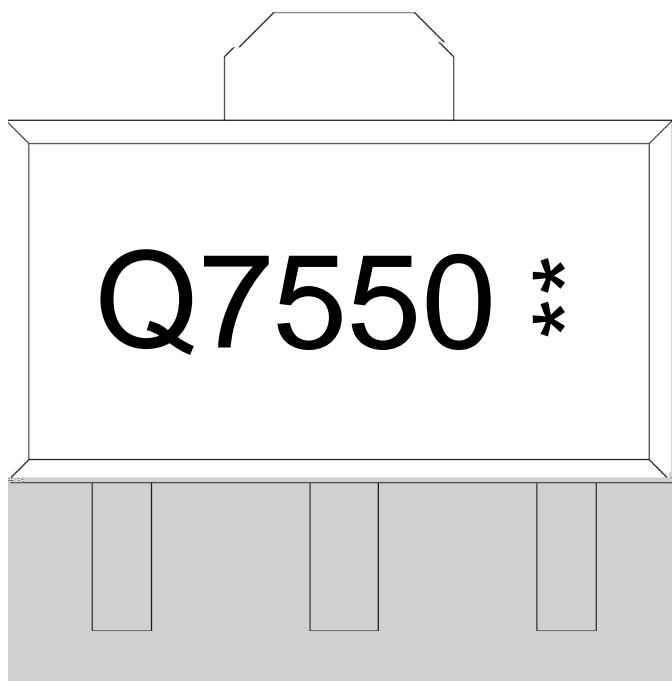
/ Double Output Circuit



/ Package Dimensions



**/ Marking Instructions**



Q

7550

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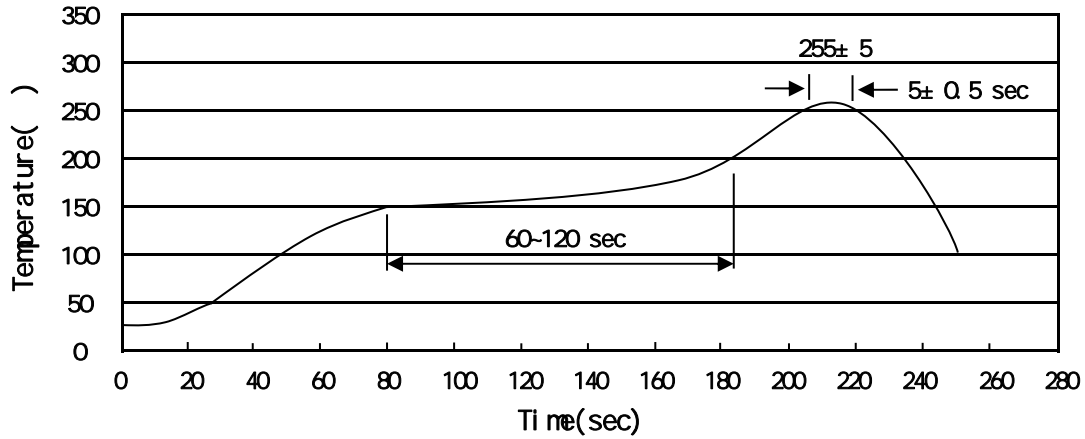
Note:

Q: Automobile halogen-free product Code

7550: Product Type

\*\*: 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