

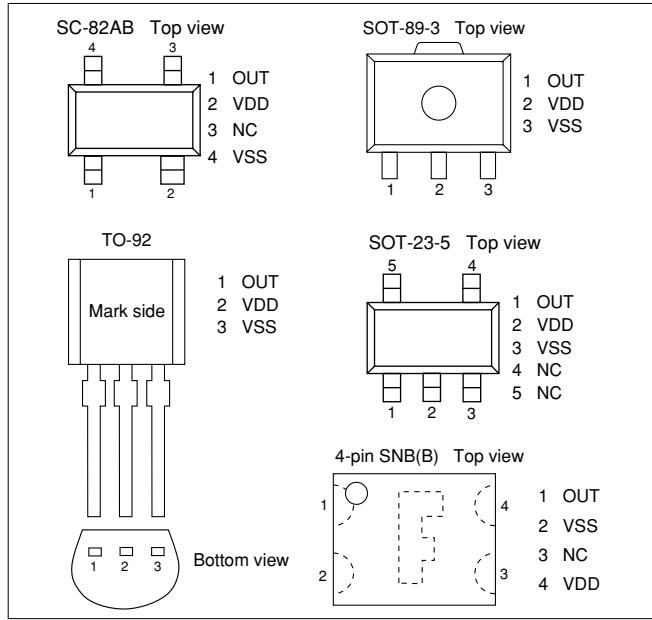
# POWER SUPPLY ICs

## SUPER-SMALL PACKAGE HIGH-PRECISION VOLTAGE DETECTOR

S-808xxC series

The S-808xxC series is a family of high-precision voltage detectors, developed using CMOS technology. The detection voltage is fixed and its accuracy is  $\pm 2.0\%$ . Five package types are available for various uses. Open-drain (Nch open-drain) output and Push-pull (CMOS output) are available.

### ■ PIN CONFIGURATIONS



### ■ FEATURES

- Ultra-low current consumption:
  - 1.3  $\mu$ A typ. (Detection voltage 1.4 V typ. or below models,  $V_{DD} = 1.5$  V)
  - 0.8  $\mu$ A typ. (Detection voltage 1.5 V typ. or above models,  $V_{DD} = 3.5$  V)
- Detection voltage accuracy:  $\pm 2.0\%$
- Operating voltage range:
  - 0.65 V to 5.0 V (Detection voltage 1.4 V typ. or below models)
  - 0.95 V to 10.0 V (Detection voltage 1.5 V typ. or above models)
- Hysteresis: 5% typ.
- Detection voltage: 0.8 V to 6.0 V (0.1 V steps)
- Output type:
  - Active low Open-drain (Nch open-drain) output
  - Active low Push-pull (CMOS output)

### ■ APPLICATIONS

- Battery checker
- Power failure detector
- Power supply monitor for portable equipment such as pagers, pocket calculators, electronic organizers, remote controllers
- Constant voltage power supply monitor for cameras, video equipment, communication devices
- Power supply monitor for microcomputers and reset for CPUs

## ■ SELECTION GUIDE (1) Open-drain (Nch open-drain) output

(1/2)

Detection voltage range	Hysteresis width (typ.)	Open-drain (Nch open-drain) [active low]				
		SC-82AB (3000/reel)	TO-92 <sup>1</sup>	SOT-89-3 (1000/reel)	SOT-23-5 (3000/reel)	4-pin SNB(B) (5000/reel)
0.8V ± 2.0%	0.034V	S-80808CNNB-B9M-T2	-	-	-	S-80808CNBB-B9M-TF
0.9V ± 2.0%	0.044V	S-80809CNNB-B9N-T2	-	-	-	S-80809CNBB-B9N-TF
1.0V ± 2.0%	0.054V	S-80810CNNB-B9O-T2	-	-	-	S-80810CNBB-B9O-TF
1.1V ± 2.0%	0.064V	S-80811CNNB-B9P-T2	-	-	-	S-80811CNBB-B9P-TF
1.2V ± 2.0%	0.073V	S-80812CNNB-B9Q-T2	-	-	-	S-80812CNBB-B9Q-TF
1.3V ± 2.0%	0.083V	S-80813CNNB-B9R-T2	-	-	-	S-80813CNBB-B9R-TF
1.4V ± 2.0%	0.093V	S-80814CNNB-B9S-T2	-	-	-	S-80814CNBB-B9S-TF
1.5V ± 2.0%	0.075V	S-80815CNNB-B8A-T2	S-80815CNY-X	S-80815CNUA-B8A-T2	S-80815CNMC-B8A-T2	S-80815CNBB-B8A-TF
1.6V ± 2.0%	0.080V	S-80816CNNB-B8B-T2	S-80816CNY-X	S-80816CNUA-B8B-T2	S-80816CNMC-B8B-T2	S-80816CNBB-B8B-TF
1.7V ± 2.0%	0.085V	S-80817CNNB-B8C-T2	S-80817CNY-X	S-80817CNUA-B8C-T2	S-80817CNMC-B8C-T2	S-80817CNBB-B8C-TF
1.8V ± 2.0%	0.090V	S-80818CNNB-B8D-T2	S-80818CNY-X	S-80818CNUA-B8D-T2	S-80818CNMC-B8D-T2	S-80818CNBB-B8D-TF
1.9V ± 2.0%	0.095V	S-80819CNNB-B8E-T2	S-80819CNY-X	S-80819CNUA-B8E-T2	S-80819CNMC-B8E-T2	S-80819CNBB-B8E-TF
2.0V ± 2.0%	0.100V	S-80820CNNB-B8F-T2	S-80820CNY-X	S-80820CNUA-B8F-T2	S-80820CNMC-B8F-T2	S-80820CNBB-B8F-TF
2.1V ± 2.0%	0.105V	S-80821CNNB-B8G-T2	S-80821CNY-X	S-80821CNUA-B8G-T2	S-80821CNMC-B8G-T2	S-80821CNBB-B8G-TF
2.2V ± 2.0%	0.110V	S-80822CNNB-B8H-T2	S-80822CNY-X	S-80822CNUA-B8H-T2	S-80822CNMC-B8H-T2	S-80822CNBB-B8H-TF
2.3V ± 2.0%	0.115V	S-80823CNNB-B8I-T2	S-80823CNY-X	S-80823CNUA-B8I-T2	S-80823CNMC-B8I-T2	S-80823CNBB-B8I-TF
2.4V ± 2.0%	0.120V	S-80824CNNB-B8J-T2	S-80824CNY-X	S-80824CNUA-B8J-T2	S-80824CNMC-B8J-T2	S-80824CNBB-B8J-TF
2.4V typ.	4.4 ± 0.1V <sup>2</sup>	-	S-80824KNY-X	S-80824CNUA-D2B-T2	-	-
2.5V ± 2.0%	0.125V	S-80825CNNB-B8K-T2	S-80825CNY-X	S-80825CNUA-B8K-T2	S-80825CNMC-B8K-T2	S-80825CNBB-B8K-TF
2.6V ± 2.0%	0.130V	S-80826CNNB-B8L-T2	S-80826CNY-X	S-80826CNUA-B8L-T2	S-80826CNMC-B8L-T2	S-80826CNBB-B8L-TF
2.7V ± 2.0%	0.135V	S-80827CNNB-B8M-T2	S-80827CNY-X	S-80827CNUA-B8M-T2	S-80827CNMC-B8M-T2	S-80827CNBB-B8M-TF
2.8V ± 2.0%	0.140V	S-80828CNNB-B8N-T2	S-80828CNY-X	S-80828CNUA-B8N-T2	S-80828CNMC-B8N-T2	S-80828CNBB-B8N-TF
2.9V ± 2.0%	0.145V	S-80829CNNB-B8O-T2	S-80829CNY-X	S-80829CNUA-B8O-T2	S-80829CNMC-B8O-T2	S-80829CNBB-B8O-TF
3.0V ± 2.0%	0.150V	S-80830CNNB-B8P-T2	S-80830CNY-X	S-80830CNUA-B8P-T2	S-80830CNMC-B8P-T2	S-80830CNBB-B8P-TF
3.1V ± 2.0%	0.155V	S-80831CNNB-B8Q-T2	S-80831CNY-X	S-80831CNUA-B8Q-T2	S-80831CNMC-B8Q-T2	S-80831CNBB-B8Q-TF
3.2V ± 2.0%	0.160V	S-80832CNNB-B8R-T2	S-80832CNY-X	S-80832CNUA-B8R-T2	S-80832CNMC-B8R-T2	S-80832CNBB-B8R-TF
3.3V ± 2.0%	0.165V	S-80833CNNB-B8S-T2	S-80833CNY-X	S-80833CNUA-B8S-T2	S-80833CNMC-B8S-T2	S-80833CNBB-B8S-TF
3.4V ± 2.0%	0.170V	S-80834CNNB-B8T-T2	S-80834CNY-X	S-80834CNUA-B8T-T2	S-80834CNMC-B8T-T2	S-80834CNBB-B8T-TF
3.5V ± 2.0%	0.175V	S-80835CNNB-B8U-T2	S-80835CNY-X	S-80835CNUA-B8U-T2	S-80835CNMC-B8U-T2	S-80835CNBB-B8U-TF
3.6V ± 2.0%	0.180V	S-80836CNNB-B8V-T2	S-80836CNY-X	S-80836CNUA-B8V-T2	S-80836CNMC-B8V-T2	S-80836CNBB-B8V-TF
3.7V ± 2.0%	0.185V	S-80837CNNB-B8W-T2	S-80837CNY-X	S-80837CNUA-B8W-T2	S-80837CNMC-B8W-T2	S-80837CNBB-B8W-TF
3.8V ± 2.0%	0.190V	S-80838CNNB-B8X-T2	S-80838CNY-X	S-80838CNUA-B8X-T2	S-80838CNMC-B8X-T2	S-80838CNBB-B8X-TF
3.9V ± 2.0%	0.195V	S-80839CNNB-B8Y-T2	S-80839CNY-X	S-80839CNUA-B8Y-T2	S-80839CNMC-B8Y-T2	S-80839CNBB-B8Y-TF
4.0V ± 2.0%	0.200V	S-80840CNNB-B8Z-T2	S-80840CNY-X	S-80840CNUA-B8Z-T2	S-80840CNMC-B8Z-T2	S-80840CNBB-B8Z-TF
4.1V ± 2.0%	0.205V	S-80841CNNB-B82-T2	S-80841CNY-X	S-80841CNUA-B82-T2	S-80841CNMC-B82-T2	S-80841CNBB-B82-TF
4.2V ± 2.0%	0.210V	S-80842CNNB-B83-T2	S-80842CNY-X	S-80842CNUA-B83-T2	S-80842CNMC-B83-T2	S-80842CNBB-B83-TF
4.3V ± 2.0%	0.215V	S-80843CNNB-B84-T2	S-80843CNY-X	S-80843CNUA-B84-T2	S-80843CNMC-B84-T2	S-80843CNBB-B84-TF
4.4V ± 2.0%	0.220V	S-80844CNNB-B85-T2	S-80844CNY-X	S-80844CNUA-B85-T2	S-80844CNMC-B85-T2	S-80844CNBB-B85-TF
4.5V ± 2.0%	0.225V	S-80845CNNB-B86-T2	S-80845CNY-X	S-80845CNUA-B86-T2	S-80845CNMC-B86-T2	S-80845CNBB-B86-TF
4.6V ± 2.0%	0.230V	S-80846CNNB-B87-T2	S-80846CNY-X	S-80846CNUA-B87-T2	S-80846CNMC-B87-T2	S-80846CNBB-B87-TF
4.6V ± 0.10V	0.10V max.	-	S-80846KNY-X	S-80846CNUA-D2C-T2	-	-
4.7V ± 2.0%	0.235V	S-80847CNNB-B88-T2	S-80847CNY-X	S-80847CNUA-B88-T2	S-80847CNMC-B88-T2	S-80847CNBB-B88-TF
4.8V ± 2.0%	0.240V	S-80848CNNB-B89-T2	S-80848CNY-X	S-80848CNUA-B89-T2	S-80848CNMC-B89-T2	S-80848CNBB-B89-TF
4.9V ± 2.0%	0.245V	S-80849CNNB-B9A-T2	S-80849CNY-X	S-80849CNUA-B9A-T2	S-80849CNMC-B9A-T2	S-80849CNBB-B9A-TF
5.0V ± 2.0%	0.250V	S-80850CNNB-B9B-T2	S-80850CNY-X	S-80850CNUA-B9B-T2	S-80850CNMC-B9B-T2	S-80850CNBB-B9B-TF
5.1V ± 2.0%	0.255V	S-80851CNNB-B9C-T2	S-80851CNY-X	S-80851CNUA-B9C-T2	S-80851CNMC-B9C-T2	S-80851CNBB-B9C-TF
5.2V ± 2.0%	0.260V	S-80852CNNB-B9D-T2	S-80852CNY-X	S-80852CNUA-B9D-T2	S-80852CNMC-B9D-T2	S-80852CNBB-B9D-TF
5.3V ± 2.0%	0.265V	S-80853CNNB-B9E-T2	S-80853CNY-X	S-80853CNUA-B9E-T2	S-80853CNMC-B9E-T2	S-80853CNBB-B9E-TF
5.4V ± 2.0%	0.270V	S-80854CNNB-B9F-T2	S-80854CNY-X	S-80854CNUA-B9F-T2	S-80854CNMC-B9F-T2	S-80854CNBB-B9F-TF
5.5V ± 2.0%	0.275V	S-80855CNNB-B9G-T2	S-80855CNY-X	S-80855CNUA-B9G-T2	S-80855CNMC-B9G-T2	S-80855CNBB-B9G-TF
5.6V ± 2.0%	0.280V	S-80856CNNB-B9H-T2	S-80856CNY-X	S-80856CNUA-B9H-T2	S-80856CNMC-B9H-T2	S-80856CNBB-B9H-TF
5.7V ± 2.0%	0.285V	S-80857CNNB-B9I-T2	S-80857CNY-X	S-80857CNUA-B9I-T2	S-80857CNMC-B9I-T2	S-80857CNBB-B9I-TF
5.8V ± 2.0%	0.290V	S-80858CNNB-B9J-T2	S-80858CNY-X	S-80858CNUA-B9J-T2	S-80858CNMC-B9J-T2	S-80858CNBB-B9J-TF
5.9V ± 2.0%	0.295V	S-80859CNNB-B9K-T2	S-80859CNY-X	S-80859CNUA-B9K-T2	S-80859CNMC-B9K-T2	S-80859CNBB-B9K-TF
6.0V ± 2.0%	0.300V	S-80860CNNB-B9L-T2	S-80860CNY-X	S-80860CNUA-B9L-T2	S-80860CNMC-B9L-T2	S-80860CNBB-B9L-TF

\*1. "X" in the model number of TO-92 differs as follows:

B: Bulk, T: Tape and reel (2000/reel), Z: Tape and ammo (2500/reel)

\*2. Describes the release voltage.

# POWER SUPPLY ICs

## ■ SELECTION GUIDE (2) Push-pull (CMOS output)

(2/2)

Detection voltage range	Hysteresis width (typ.)	Push-pull (CMOS output) [active low]				
		SC-82AB (3000/reel)	TO-92 <sup>1</sup>	SOT-89-3 (1000/reel)	SOT-23-5 (3000/reel)	4-pin SNB(B) (5000/reel)
0.8V ± 2.0%	0.034V	S-80808CLNB-B7M-T2	-	-	-	S-80808CLBB-B7M-TF
0.9V ± 2.0%	0.044V	S-80809CLNB-B7N-T2	-	-	-	S-80809CLBB-B7N-TF
1.0V ± 2.0%	0.054V	S-80810CLNB-B7O-T2	-	-	-	S-80810CLBB-B7O-TF
1.1V ± 2.0%	0.064V	S-80811CLNB-B7P-T2	-	-	-	S-80811CLBB-B7P-TF
1.2V ± 2.0%	0.073V	S-80812CLNB-B7Q-T2	-	-	-	S-80812CLBB-B7Q-TF
1.3V ± 2.0%	0.083V	S-80813CLNB-B7R-T2	-	-	-	S-80813CLBB-B7R-TF
1.4V ± 2.0%	0.093V	S-80814CLNB-B7S-T2	-	-	-	S-80814CLBB-B7S-TF
1.5V ± 2.0%	0.075V	S-80815CLNB-B6A-T2	S-80815CLUA-B6A-T2	S-80815CLMC-B6A-T2	S-80815CLBB-B6A-TF	
1.6V ± 2.0%	0.080V	S-80816CLNB-B6B-T2	S-80816CLUA-B6B-T2	S-80816CLMC-B6B-T2	S-80816CLBB-B6B-TF	
1.7V ± 2.0%	0.085V	S-80817CLNB-B6C-T2	S-80817CLUA-B6C-T2	S-80817CLMC-B6C-T2	S-80817CLBB-B6C-TF	
1.8V ± 2.0%	0.090V	S-80818CLNB-B6D-T2	S-80818CLUA-B6D-T2	S-80818CLMC-B6D-T2	S-80818CLBB-B6D-TF	
1.9V ± 2.0%	0.095V	S-80819CLNB-B6E-T2	S-80819CLUA-B6E-T2	S-80819CLMC-B6E-T2	S-80819CLBB-B6E-TF	
2.0V ± 2.0%	0.100V	S-80820CLNB-B6F-T2	S-80820CLUA-B6F-T2	S-80820CLMC-B6F-T2	S-80820CLBB-B6F-TF	
2.1V ± 2.0%	0.105V	S-80821CLNB-B6G-T2	S-80821CLUA-B6G-T2	S-80821CLMC-B6G-T2	S-80821CLBB-B6G-TF	
2.2V ± 2.0%	0.110V	S-80822CLNB-B6H-T2	S-80822CLUA-B6H-T2	S-80822CLMC-B6H-T2	S-80822CLBB-B6H-TF	
2.3V ± 2.0%	0.115V	S-80823CLNB-B6I-T2	S-80823CLUA-B6I-T2	S-80823CLMC-B6I-T2	S-80823CLBB-B6I-TF	
2.4V ± 2.0%	0.120V	S-80824CLNB-B6J-T2	S-80824CLUA-B6J-T2	S-80824CLMC-B6J-T2	S-80824CLBB-B6J-TF	
2.5V ± 2.0%	0.125V	S-80825CLNB-B6K-T2	S-80825CLUA-B6K-T2	S-80825CLMC-B6K-T2	S-80825CLBB-B6K-TF	
2.6V ± 2.0%	0.130V	S-80826CLNB-B6L-T2	S-80826CLUA-B6L-T2	S-80826CLMC-B6L-T2	S-80826CLBB-B6L-TF	
2.7V ± 2.0%	0.135V	S-80827CLNB-B6M-T2	S-80827CLUA-B6M-T2	S-80827CLMC-B6M-T2	S-80827CLBB-B6M-TF	
2.8V ± 2.0%	0.140V	S-80828CLNB-B6N-T2	S-80828CLUA-B6N-T2	S-80828CLMC-B6N-T2	S-80828CLBB-B6N-TF	
2.9V ± 2.0%	0.145V	S-80829CLNB-B6O-T2	S-80829CLUA-B6O-T2	S-80829CLMC-B6O-T2	S-80829CLBB-B6O-TF	
3.0V ± 2.0%	0.150V	S-80830CLNB-B6P-T2	S-80830CLUA-B6P-T2	S-80830CLMC-B6P-T2	S-80830CLBB-B6P-TF	
3.1V ± 2.0%	0.155V	S-80831CLNB-B6Q-T2	S-80831CLUA-B6Q-T2	S-80831CLMC-B6Q-T2	S-80831CLBB-B6Q-TF	
3.2V ± 2.0%	0.160V	S-80832CLNB-B6R-T2	S-80832CLUA-B6R-T2	S-80832CLMC-B6R-T2	S-80832CLBB-B6R-TF	
3.3V ± 2.0%	0.165V	S-80833CLNB-B6S-T2	S-80833CLUA-B6S-T2	S-80833CLMC-B6S-T2	S-80833CLBB-B6S-TF	
3.4V ± 2.0%	0.170V	S-80834CLNB-B6T-T2	S-80834CLUA-B6T-T2	S-80834CLMC-B6T-T2	S-80834CLBB-B6T-TF	
3.5V ± 2.0%	0.175V	S-80835CLNB-B6U-T2	S-80835CLUA-B6U-T2	S-80835CLMC-B6U-T2	S-80835CLBB-B6U-TF	
3.6V ± 2.0%	0.180V	S-80836CLNB-B6V-T2	S-80836CLUA-B6V-T2	S-80836CLMC-B6V-T2	S-80836CLBB-B6V-TF	
3.7V ± 2.0%	0.185V	S-80837CLNB-B6W-T2	S-80837CLUA-B6W-T2	S-80837CLMC-B6W-T2	S-80837CLBB-B6W-TF	
3.8V ± 2.0%	0.190V	S-80838CLNB-B6X-T2	S-80838CLUA-B6X-T2	S-80838CLMC-B6X-T2	S-80838CLBB-B6X-TF	
3.9V ± 2.0%	0.195V	S-80839CLNB-B6Y-T2	S-80839CLUA-B6Y-T2	S-80839CLMC-B6Y-T2	S-80839CLBB-B6Y-TF	
4.0V ± 2.0%	0.200V	S-80840CLNB-B6Z-T2	S-80840CLUA-B6Z-T2	S-80840CLMC-B6Z-T2	S-80840CLBB-B6Z-TF	
4.1V ± 2.0%	0.205V	S-80841CLNB-B62-T2	S-80841CLUA-B62-T2	S-80841CLMC-B62-T2	S-80841CLBB-B62-TF	
4.2V ± 2.0%	0.210V	S-80842CLNB-B63-T2	S-80842CLUA-B63-T2	S-80842CLMC-B63-T2	S-80842CLBB-B63-TF	
4.3V ± 2.0%	0.215V	S-80843CLNB-B64-T2	S-80843CLUA-B64-T2	S-80843CLMC-B64-T2	S-80843CLBB-B64-TF	
4.4V ± 2.0%	0.220V	S-80844CLNB-B65-T2	S-80844CLUA-B65-T2	S-80844CLMC-B65-T2	S-80844CLBB-B65-TF	
4.45V typ.	4.70V max. <sup>2</sup>	-	S-80844KLUA-X	S-80844KLUA-D2A-T2	-	-
4.5V ± 2.0%	0.225V	S-80845CLNB-B66-T2	S-80845CLUA-X	S-80845CLUA-B66-T2	S-80845CLMC-B66-T2	S-80845CLBB-B66-TF
4.6V ± 2.0%	0.230V	S-80846CLNB-B67-T2	S-80846CLUA-X	S-80846CLUA-B67-T2	S-80846CLMC-B67-T2	S-80846CLBB-B67-TF
4.7V ± 2.0%	0.235V	S-80847CLNB-B68-T2	S-80847CLUA-X	S-80847CLUA-B68-T2	S-80847CLMC-B68-T2	S-80847CLBB-B68-TF
4.8V ± 2.0%	0.240V	S-80848CLNB-B69-T2	S-80848CLUA-X	S-80848CLUA-B69-T2	S-80848CLMC-B69-T2	S-80848CLBB-B69-TF
4.9V ± 2.0%	0.245V	S-80849CLNB-B7A-T2	S-80849CLUA-X	S-80849CLUA-B7A-T2	S-80849CLMC-B7A-T2	S-80849CLBB-B7A-TF
5.0V ± 2.0%	0.250V	S-80850CLNB-B7B-T2	S-80850CLUA-X	S-80850CLUA-B7B-T2	S-80850CLMC-B7B-T2	S-80850CLBB-B7B-TF
5.1V ± 2.0%	0.255V	S-80851CLNB-B7C-T2	S-80851CLUA-X	S-80851CLUA-B7C-T2	S-80851CLMC-B7C-T2	S-80851CLBB-B7C-TF
5.2V ± 2.0%	0.260V	S-80852CLNB-B7D-T2	S-80852CLUA-X	S-80852CLUA-B7D-T2	S-80852CLMC-B7D-T2	S-80852CLBB-B7D-TF
5.3V ± 2.0%	0.265V	S-80853CLNB-B7E-T2	S-80853CLUA-X	S-80853CLUA-B7E-T2	S-80853CLMC-B7E-T2	S-80853CLBB-B7E-TF
5.4V ± 2.0%	0.270V	S-80854CLNB-B7F-T2	S-80854CLUA-X	S-80854CLUA-B7F-T2	S-80854CLMC-B7F-T2	S-80854CLBB-B7F-TF
5.5V ± 2.0%	0.275V	S-80855CLNB-B7G-T2	S-80855CLUA-X	S-80855CLUA-B7G-T2	S-80855CLMC-B7G-T2	S-80855CLBB-B7G-TF
5.6V ± 2.0%	0.280V	S-80856CLNB-B7H-T2	S-80856CLUA-X	S-80856CLUA-B7H-T2	S-80856CLMC-B7H-T2	S-80856CLBB-B7H-TF
5.7V ± 2.0%	0.285V	S-80857CLNB-B7I-T2	S-80857CLUA-X	S-80857CLUA-B7I-T2	S-80857CLMC-B7I-T2	S-80857CLBB-B7I-TF
5.8V ± 2.0%	0.290V	S-80858CLNB-B7J-T2	S-80858CLUA-X	S-80858CLUA-B7J-T2	S-80858CLMC-B7J-T2	S-80858CLBB-B7J-TF
5.9V ± 2.0%	0.295V	S-80859CLNB-B7K-T2	S-80859CLUA-X	S-80859CLUA-B7K-T2	S-80859CLMC-B7K-T2	S-80859CLBB-B7K-TF
6.0V ± 2.0%	0.300V	S-80860CLNB-B7L-T2	S-80860CLUA-X	S-80860CLUA-B7L-T2	S-80860CLMC-B7L-T2	S-80860CLBB-B7L-TF

\*1. "X" in the model number of TO-92 differs as follows:

B: Bulk, T: Tape and reel (2000/reel), Z: Tape and ammo (2500/reel)

\*2. Describes the release voltage.