

### GENERAL DESCRIPTION

The SGM890B and SGM891B are low-power and high-accuracy voltage detectors. The adjustable threshold range is 0.8V to 5V with increments of 0.1V, which greatly provides application flexibility.

Since the sense pin (VSEN) of the devices is separate from the power supply pin, it can monitor other power supplies. And when the monitored power supply voltage drops to 0V, the device can also maintain the detection state.

In addition, the  $C_D$  pin of SGM890B has an external capacitor connected to GND, which can adjust the release delay time. Consequently delay time can be set to more than 1s when the delay capacitor ( $C_D$ ) is 1 $\mu$ F. These devices are very suitable for applications in power sequencing, reset sequencing and power switching.

The SGM890B and SGM891B are available in a Green SOT-23-5 package. They are specified over the -40°C to +125°C operating temperature range.

### FEATURES

- **Operating Voltage Range: 1V to 6V**
- **High Accuracy Detection:  $\pm 1\%$  (TYP)**
- **Low Power Consumption: 0.3 $\mu$ A (TYP) at  $V_{IN} = 1V$**
- **Detection Voltage Range: 0.8V to 5V (0.1V Increments)**
- **Detection Voltage Temperature Coefficient:  $\pm 40$ ppm/ $^{\circ}$ C (TYP)**
- **Adjustable Release Delay Time (SGM890B Only)**
- **Sense Pin Separates from Power Supply**
- **N-Channel Open-Drain Output**
- **-40°C to +125°C Operating Temperature Range**
- **Available in a Green SOT-23-5 Package**

### APPLICATIONS

- Power Sequencing and Reset Sequencing
- Power Switching
- Automotive Equipment
- Portable Equipment
- Computers/Servers

### TYPICAL APPLICATION

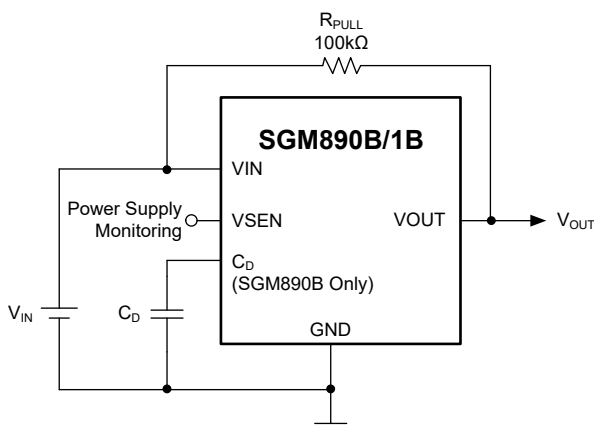


Figure 1. Typical Application Circuit

# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

## SGM890B/SGM891B

### PACKAGE/ORDERING INFORMATION

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM890B-0.8	0.8	SOT-23-5	-40°C to +125°C	SGM890B-0.8XN5G/TR	R60XX	Tape and Reel, 3000
SGM890B-0.9	0.9	SOT-23-5	-40°C to +125°C	SGM890B-0.9XN5G/TR	SZZXX	Tape and Reel, 3000
SGM890B-1.0	1.0	SOT-23-5	-40°C to +125°C	SGM890B-1.0XN5G/TR	SYTXX	Tape and Reel, 3000
SGM890B-1.1	1.1	SOT-23-5	-40°C to +125°C	SGM890B-1.1XN5G/TR	G0GXX	Tape and Reel, 3000
SGM890B-1.2	1.2	SOT-23-5	-40°C to +125°C	SGM890B-1.2XN5G/TR	G0HXX	Tape and Reel, 3000
SGM890B-1.3	1.3	SOT-23-5	-40°C to +125°C	SGM890B-1.3XN5G/TR	G0IXX	Tape and Reel, 3000
SGM890B-1.4	1.4	SOT-23-5	-40°C to +125°C	SGM890B-1.4XN5G/TR	CH4XX	Tape and Reel, 3000
SGM890B-1.5	1.5	SOT-23-5	-40°C to +125°C	SGM890B-1.5XN5G/TR	G0JXX	Tape and Reel, 3000
SGM890B-1.6	1.6	SOT-23-5	-40°C to +125°C	SGM890B-1.6XN5G/TR	R61XX	Tape and Reel, 3000
SGM890B-1.7	1.7	SOT-23-5	-40°C to +125°C	SGM890B-1.7XN5G/TR	G0KXX	Tape and Reel, 3000
SGM890B-1.8	1.8	SOT-23-5	-40°C to +125°C	SGM890B-1.8XN5G/TR	SYSXX	Tape and Reel, 3000
SGM890B-1.9	1.9	SOT-23-5	-40°C to +125°C	SGM890B-1.9XN5G/TR	G0LXX	Tape and Reel, 3000
SGM890B-2.0	2.0	SOT-23-5	-40°C to +125°C	SGM890B-2.0XN5G/TR	G0MXX	Tape and Reel, 3000
SGM890B-2.1	2.1	SOT-23-5	-40°C to +125°C	SGM890B-2.1XN5G/TR	G0NXX	Tape and Reel, 3000
SGM890B-2.2	2.2	SOT-23-5	-40°C to +125°C	SGM890B-2.2XN5G/TR	G0PXX	Tape and Reel, 3000
SGM890B-2.3	2.3	SOT-23-5	-40°C to +125°C	SGM890B-2.3XN5G/TR	G0QXX	Tape and Reel, 3000
SGM890B-2.4	2.4	SOT-23-5	-40°C to +125°C	SGM890B-2.4XN5G/TR	CI1XX	Tape and Reel, 3000
SGM890B-2.5	2.5	SOT-23-5	-40°C to +125°C	SGM890B-2.5XN5G/TR	SYRXX	Tape and Reel, 3000
SGM890B-2.6	2.6	SOT-23-5	-40°C to +125°C	SGM890B-2.6XN5G/TR	G0RXX	Tape and Reel, 3000
SGM890B-2.7	2.7	SOT-23-5	-40°C to +125°C	SGM890B-2.7XN5G/TR	SYQXX	Tape and Reel, 3000
SGM890B-2.8	2.8	SOT-23-5	-40°C to +125°C	SGM890B-2.8XN5G/TR	RCAXX	Tape and Reel, 3000
SGM890B-2.9	2.9	SOT-23-5	-40°C to +125°C	SGM890B-2.9XN5G/TR	R62XX	Tape and Reel, 3000
SGM890B-3.0	3.0	SOT-23-5	-40°C to +125°C	SGM890B-3.0XN5G/TR	R63XX	Tape and Reel, 3000
SGM890B-3.1	3.1	SOT-23-5	-40°C to +125°C	SGM890B-3.1XN5G/TR	G0SXX	Tape and Reel, 3000
SGM890B-3.2	3.2	SOT-23-5	-40°C to +125°C	SGM890B-3.2XN5G/TR	G0TXX	Tape and Reel, 3000
SGM890B-3.3	3.3	SOT-23-5	-40°C to +125°C	SGM890B-3.3XN5G/TR	R64XX	Tape and Reel, 3000

# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

## SGM890B/SGM891B

### PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM890B-3.4	3.4	SOT-23-5	-40°C to +125°C	SGM890B-3.4XN5G/TR	G0UXX	Tape and Reel, 3000
SGM890B-3.5	3.5	SOT-23-5	-40°C to +125°C	SGM890B-3.5XN5G/TR	G0VXX	Tape and Reel, 3000
SGM890B-3.6	3.6	SOT-23-5	-40°C to +125°C	SGM890B-3.6XN5G/TR	G0WXX	Tape and Reel, 3000
SGM890B-3.7	3.7	SOT-23-5	-40°C to +125°C	SGM890B-3.7XN5G/TR	G0XXX	Tape and Reel, 3000
SGM890B-3.8	3.8	SOT-23-5	-40°C to +125°C	SGM890B-3.8XN5G/TR	G0YXX	Tape and Reel, 3000
SGM890B-3.9	3.9	SOT-23-5	-40°C to +125°C	SGM890B-3.9XN5G/TR	SYPXX	Tape and Reel, 3000
SGM890B-4.0	4.0	SOT-23-5	-40°C to +125°C	SGM890B-4.0XN5G/TR	G0ZXX	Tape and Reel, 3000
SGM890B-4.1	4.1	SOT-23-5	-40°C to +125°C	SGM890B-4.1XN5G/TR	G1GXX	Tape and Reel, 3000
SGM890B-4.2	4.2	SOT-23-5	-40°C to +125°C	SGM890B-4.2XN5G/TR	G1HXX	Tape and Reel, 3000
SGM890B-4.3	4.3	SOT-23-5	-40°C to +125°C	SGM890B-4.3XN5G/TR	G1IXX	Tape and Reel, 3000
SGM890B-4.4	4.4	SOT-23-5	-40°C to +125°C	SGM890B-4.4XN5G/TR	G1JXX	Tape and Reel, 3000
SGM890B-4.5	4.5	SOT-23-5	-40°C to +125°C	SGM890B-4.5XN5G/TR	G1KXX	Tape and Reel, 3000
SGM890B-4.6	4.6	SOT-23-5	-40°C to +125°C	SGM890B-4.6XN5G/TR	SYNXX	Tape and Reel, 3000
SGM890B-4.7	4.7	SOT-23-5	-40°C to +125°C	SGM890B-4.7XN5G/TR	G1LXX	Tape and Reel, 3000
SGM890B-4.8	4.8	SOT-23-5	-40°C to +125°C	SGM890B-4.8XN5G/TR	G1MXX	Tape and Reel, 3000
SGM890B-4.9	4.9	SOT-23-5	-40°C to +125°C	SGM890B-4.9XN5G/TR	G1NXX	Tape and Reel, 3000
SGM890B-5.0	5.0	SOT-23-5	-40°C to +125°C	SGM890B-5.0XN5G/TR	R65XX	Tape and Reel, 3000
SGM891B-0.8	0.8	SOT-23-5	-40°C to +125°C	SGM891B-0.8XN5G/TR	G1PXX	Tape and Reel, 3000
SGM891B-0.9	0.9	SOT-23-5	-40°C to +125°C	SGM891B-0.9XN5G/TR	G1QXX	Tape and Reel, 3000
SGM891B-1.0	1.0	SOT-23-5	-40°C to +125°C	SGM891B-1.0XN5G/TR	SZJXX	Tape and Reel, 3000
SGM891B-1.1	1.1	SOT-23-5	-40°C to +125°C	SGM891B-1.1XN5G/TR	G1SXX	Tape and Reel, 3000
SGM891B-1.2	1.2	SOT-23-5	-40°C to +125°C	SGM891B-1.2XN5G/TR	G1TXX	Tape and Reel, 3000
SGM891B-1.3	1.3	SOT-23-5	-40°C to +125°C	SGM891B-1.3XN5G/TR	G1UXX	Tape and Reel, 3000
SGM891B-1.4	1.4	SOT-23-5	-40°C to +125°C	SGM891B-1.4XN5G/TR	CH5XX	Tape and Reel, 3000
SGM891B-1.5	1.5	SOT-23-5	-40°C to +125°C	SGM891B-1.5XN5G/TR	G1VXX	Tape and Reel, 3000
SGM891B-1.6	1.6	SOT-23-5	-40°C to +125°C	SGM891B-1.6XN5G/TR	SZIXX	Tape and Reel, 3000

# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

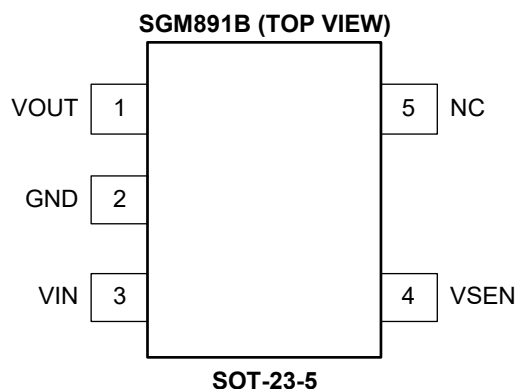
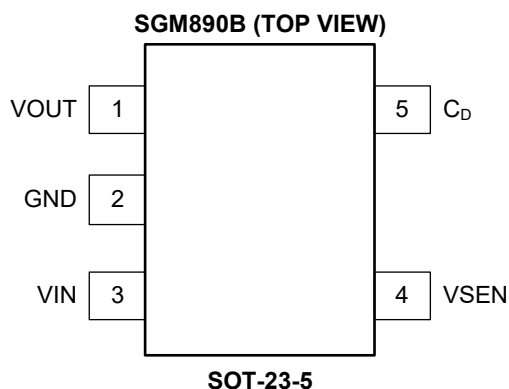
## SGM890B/SGM891B

### PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM891B-1.7	1.7	SOT-23-5	-40°C to +125°C	SGM891B-1.7XN5G/TR	G1WXX	Tape and Reel, 3000
SGM891B-1.8	1.8	SOT-23-5	-40°C to +125°C	SGM891B-1.8XN5G/TR	SZHXX	Tape and Reel, 3000
SGM891B-1.9	1.9	SOT-23-5	-40°C to +125°C	SGM891B-1.9XN5G/TR	G1XXX	Tape and Reel, 3000
SGM891B-2.0	2.0	SOT-23-5	-40°C to +125°C	SGM891B-2.0XN5G/TR	G1YXX	Tape and Reel, 3000
SGM891B-2.1	2.1	SOT-23-5	-40°C to +125°C	SGM891B-2.1XN5G/TR	G1ZXX	Tape and Reel, 3000
SGM891B-2.2	2.2	SOT-23-5	-40°C to +125°C	SGM891B-2.2XN5G/TR	G2GXX	Tape and Reel, 3000
SGM891B-2.3	2.3	SOT-23-5	-40°C to +125°C	SGM891B-2.3XN5G/TR	G2HXX	Tape and Reel, 3000
SGM891B-2.4	2.4	SOT-23-5	-40°C to +125°C	SGM891B-2.4XN5G/TR	G2IXX	Tape and Reel, 3000
SGM891B-2.5	2.5	SOT-23-5	-40°C to +125°C	SGM891B-2.5XN5G/TR	SZGXX	Tape and Reel, 3000
SGM891B-2.6	2.6	SOT-23-5	-40°C to +125°C	SGM891B-2.6XN5G/TR	G2JXX	Tape and Reel, 3000
SGM891B-2.7	2.7	SOT-23-5	-40°C to +125°C	SGM891B-2.7XN5G/TR	SYZXX	Tape and Reel, 3000
SGM891B-2.8	2.8	SOT-23-5	-40°C to +125°C	SGM891B-2.8XN5G/TR	G2KXX	Tape and Reel, 3000
SGM891B-2.9	2.9	SOT-23-5	-40°C to +125°C	SGM891B-2.9XN5G/TR	G2LXX	Tape and Reel, 3000
SGM891B-3.0	3.0	SOT-23-5	-40°C to +125°C	SGM891B-3.0XN5G/TR	SYXX	Tape and Reel, 3000
SGM891B-3.1	3.1	SOT-23-5	-40°C to +125°C	SGM891B-3.1XN5G/TR	G2MXX	Tape and Reel, 3000
SGM891B-3.2	3.2	SOT-23-5	-40°C to +125°C	SGM891B-3.2XN5G/TR	G2NXX	Tape and Reel, 3000
SGM891B-3.3	3.3	SOT-23-5	-40°C to +125°C	SGM891B-3.3XN5G/TR	SYXXX	Tape and Reel, 3000
SGM891B-3.4	3.4	SOT-23-5	-40°C to +125°C	SGM891B-3.4XN5G/TR	G2PXX	Tape and Reel, 3000
SGM891B-3.5	3.5	SOT-23-5	-40°C to +125°C	SGM891B-3.5XN5G/TR	G2QXX	Tape and Reel, 3000
SGM891B-3.6	3.6	SOT-23-5	-40°C to +125°C	SGM891B-3.6XN5G/TR	G2RXX	Tape and Reel, 3000
SGM891B-3.7	3.7	SOT-23-5	-40°C to +125°C	SGM891B-3.7XN5G/TR	G2SXX	Tape and Reel, 3000
SGM891B-3.8	3.8	SOT-23-5	-40°C to +125°C	SGM891B-3.8XN5G/TR	G2TXX	Tape and Reel, 3000
SGM891B-3.9	3.9	SOT-23-5	-40°C to +125°C	SGM891B-3.9XN5G/TR	SYWXX	Tape and Reel, 3000
SGM891B-4.0	4.0	SOT-23-5	-40°C to +125°C	SGM891B-4.0XN5G/TR	G2UXX	Tape and Reel, 3000
SGM891B-4.1	4.1	SOT-23-5	-40°C to +125°C	SGM891B-4.1XN5G/TR	G2VXX	Tape and Reel, 3000
SGM891B-4.2	4.2	SOT-23-5	-40°C to +125°C	SGM891B-4.2XN5G/TR	G2WXX	Tape and Reel, 3000



**PIN CONFIGURATIONS**



**PIN DESCRIPTION**

PIN	NAME		FUNCTION
	SGM890B	SGM891B	
1	VOUT	VOUT	Active-Low Output Pin.
2	GND	GND	Ground Pin.
3	VIN	VIN	Supply Voltage Pin.
4	VSEN	VSEN	Sense Pin.
5	C <sub>D</sub>	—	Adjustable Delay Capacitor Pin (SGM890B only).
	—	NC	Not connected.

**ELECTRICAL CHARACTERISTICS**

(T<sub>J</sub> = +25°C, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	
Operating Voltage	V <sub>IN</sub>	V <sub>DET</sub> = 0.8V to 5V, T <sub>J</sub> = -40°C to +125°C	1		6	V	
Detection Voltage	V <sub>DET</sub>	V <sub>IN</sub> = 1V to 6V, Test Circuit 1	T <sub>J</sub> = +25°C		E-1		
			T <sub>J</sub> = -40°C to +125°C		E-2		
Hysteresis Voltage	V <sub>HYS</sub>	V <sub>IN</sub> = 1V to 6V, Test Circuit 1	SGM890B		E-3		
			SGM891B		E-4		
Detection Voltage Line Regulation	$\frac{\Delta V_{DET}}{(\Delta V_{IN} \times V_{DET})}$	V <sub>IN</sub> = 1V to 6V, Test Circuit 1		±0.03		%/V	
Detection Voltage Temperature Coefficient	$\frac{\Delta V_{DET}}{(\Delta T_J \times V_{DET})}$	T <sub>J</sub> = -40°C to +125°C, Test Circuit 1		±40	±150	ppm/°C	
Supply Current	I <sub>CC</sub>	Test Circuit 2	V <sub>IN</sub> = 1V		0.3	0.6	μA
			V <sub>IN</sub> = 3V		0.5	1.0	
			V <sub>IN</sub> = 6V		0.7	1.3	
Output Current	I <sub>OUT</sub>	V <sub>SEN</sub> = 0V, V <sub>DS_NCH</sub> = 0.5V, Test Circuit 3	V <sub>IN</sub> = 1V	0.2	0.8		mA
			V <sub>IN</sub> = 2V	9.0	12.0		
			V <sub>IN</sub> = 3V	13.0	17.5		
			V <sub>IN</sub> = 4V	15.0	20.5		
			V <sub>IN</sub> = 5V	16.0	22.0		
			V <sub>IN</sub> = 6V	16.5	23.0		
Leakage Current	I <sub>LEAK</sub>	V <sub>IN</sub> = V <sub>SEN</sub> = V <sub>OUT</sub> = 6V, C <sub>D</sub> : Open, Test Circuit 3		0.02	1.50	μA	
Sense Resistance	R <sub>SEN</sub>	V <sub>SEN</sub> = 5V, V <sub>IN</sub> = 0V, Test Circuit 4	23.0	26.5	30.0	MΩ	
Delay Resistance	R <sub>DELAY</sub>	V <sub>SEN</sub> = 6V, V <sub>IN</sub> = 5V, V <sub>CD</sub> = 0V, Test Circuit 5	1.7	2.2	2.6	MΩ	
<b>SGM890B Only</b>							
Delay Capacitance Pin Sink Current	I <sub>CD</sub>	V <sub>CD</sub> = 0.5V, V <sub>IN</sub> = 1V, Test Circuit 5	110	230	350	μA	
Delay Capacitance Pin Threshold Voltage	V <sub>TCD</sub>	V <sub>SEN</sub> = 6V, Test Circuit 6	V <sub>IN</sub> = 1V	0.4	0.5	0.7	V
			V <sub>IN</sub> = 6V	2.9	3.0	3.2	
Detection Delay Time	t <sub>DET0</sub>	V <sub>IN</sub> = 6V, V <sub>SEN</sub> = 6V to 0V, C <sub>D</sub> : Open, Test Circuit 7		30	70	μs	
Release Delay Time	t <sub>DR0</sub>	V <sub>IN</sub> = 6V, V <sub>SEN</sub> = 0V to 6V, C <sub>D</sub> : Open, Test Circuit 7		85	180	μs	

# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

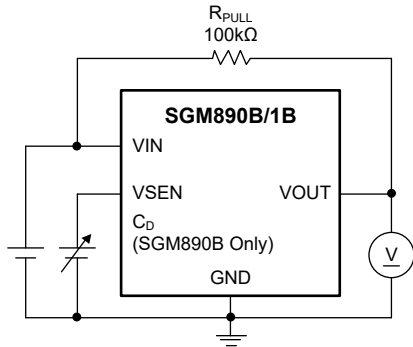
## SGM890B/SGM891B

### VOLTAGE CHART

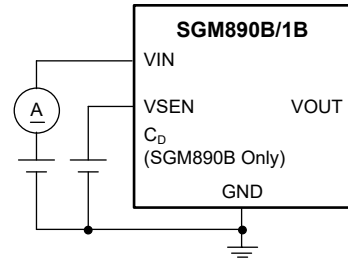
Symbol	E-1		E-2		E-3			E-4		
Conditions  Nominal Voltage (V)	T <sub>J</sub> = +25°C		T <sub>J</sub> = -40°C to +125°C		T <sub>J</sub> = +25°C			T <sub>J</sub> = +25°C		
	SGM890B/SGM891B		SGM890B/SGM891B		SGM890B Only			SGM891B Only		
	V <sub>DET</sub> (V), 1% Accuracy		V <sub>DET</sub> (V), 2% Accuracy		V <sub>HYS</sub> (V)			V <sub>HYS</sub> (V)		
	MIN	MAX	MIN	MAX	MIN	TYP	MAX	MIN	TYP	MAX
0.8	0.792	0.808	0.784	0.816	0.024	0.040	0.056	0	0.004	0.007
0.9	0.891	0.909	0.882	0.918	0.027	0.045	0.063		0.004	0.008
1.0	0.990	1.010	0.980	1.020	0.030	0.050	0.070		0.005	0.009
1.1	1.089	1.111	1.078	1.122	0.033	0.055	0.077		0.006	0.010
1.2	1.188	1.212	1.176	1.224	0.036	0.060	0.084		0.006	0.011
1.3	1.287	1.313	1.274	1.326	0.039	0.065	0.091		0.006	0.012
1.4	1.386	1.414	1.372	1.428	0.042	0.070	0.098		0.007	0.013
1.5	1.485	1.515	1.470	1.530	0.045	0.075	0.105		0.008	0.014
1.6	1.584	1.616	1.568	1.632	0.048	0.080	0.112		0.008	0.015
1.7	1.683	1.717	1.666	1.734	0.051	0.085	0.119		0.008	0.016
1.8	1.782	1.818	1.764	1.836	0.054	0.090	0.126		0.009	0.016
1.9	1.881	1.919	1.862	1.938	0.057	0.095	0.133		0.010	0.017
2.0	1.980	2.020	1.960	2.040	0.060	0.100	0.140		0.010	0.018
2.1	2.079	2.121	2.058	2.142	0.064	0.105	0.146		0.011	0.019
2.2	2.178	2.222	2.156	2.244	0.067	0.110	0.153		0.011	0.020
2.3	2.277	2.323	2.254	2.346	0.070	0.115	0.160		0.011	0.021
2.4	2.376	2.424	2.352	2.448	0.073	0.120	0.167		0.012	0.022
2.5	2.475	2.525	2.450	2.550	0.076	0.125	0.174		0.125	0.034
2.6	2.574	2.626	2.548	2.652	0.079	0.130	0.181		0.013	0.024
2.7	2.673	2.727	2.646	2.754	0.082	0.135	0.188		0.014	0.025
2.8	2.772	2.828	2.744	2.856	0.085	0.140	0.195		0.014	0.026
2.9	2.871	2.929	2.842	2.958	0.088	0.145	0.202		0.015	0.027
3.0	2.970	3.030	2.940	3.060	0.091	0.150	0.209		0.015	0.027
3.1	3.069	3.131	3.038	3.162	0.094	0.155	0.216		0.015	0.028
3.2	3.168	3.232	3.136	3.264	0.097	0.160	0.223		0.016	0.029
3.3	3.267	3.333	3.234	3.366	0.100	0.165	0.230		0.017	0.030
3.4	3.366	3.434	3.332	3.468	0.103	0.170	0.237		0.017	0.031
3.5	3.465	3.535	3.430	3.570	0.106	0.175	0.244		0.018	0.032
3.6	3.564	3.636	3.528	3.672	0.109	0.180	0.251		0.018	0.033
3.7	3.663	3.737	3.626	3.774	0.112	0.185	0.258		0.019	0.034
3.8	3.762	3.838	3.724	3.876	0.115	0.190	0.265	0.019	0.035	
3.9	3.861	3.939	3.822	3.978	0.118	0.195	0.272	0.019	0.036	
4.0	3.960	4.040	3.920	4.080	0.121	0.200	0.279	0.020	0.037	
4.1	4.059	4.141	4.018	4.182	0.124	0.205	0.286	0.021	0.037	
4.2	4.158	4.242	4.116	4.284	0.127	0.210	0.293	0.021	0.038	
4.3	4.257	4.343	4.214	4.386	0.130	0.215	0.300	0.021	0.039	
4.4	4.356	4.444	4.312	4.488	0.133	0.220	0.307	0.022	0.040	
4.5	4.455	4.545	4.410	4.590	0.136	0.225	0.314	0.023	0.041	
4.6	4.554	4.646	4.508	4.692	0.139	0.230	0.321	0.023	0.042	
4.7	4.653	4.747	4.606	4.794	0.142	0.235	0.328	0.024	0.043	
4.8	4.752	4.848	4.704	4.896	0.145	0.240	0.335	0.024	0.044	
4.9	4.851	4.949	4.802	4.998	0.148	0.245	0.342	0.024	0.045	
5.0	4.950	5.050	4.900	5.100	0.151	0.250	0.349	0.025	0.046	



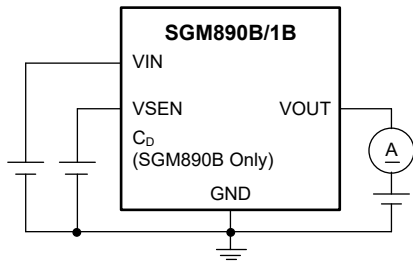
**TEST CIRCUITS**



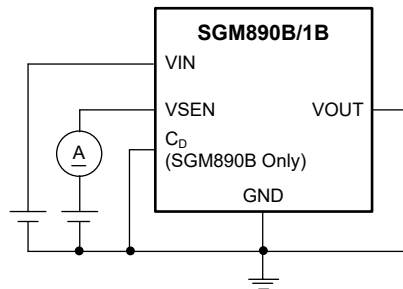
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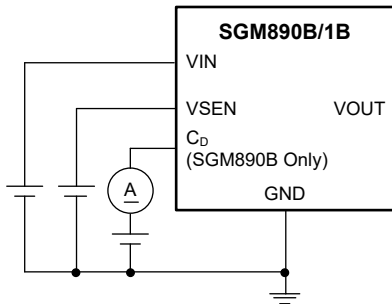
**Test Circuit 2**



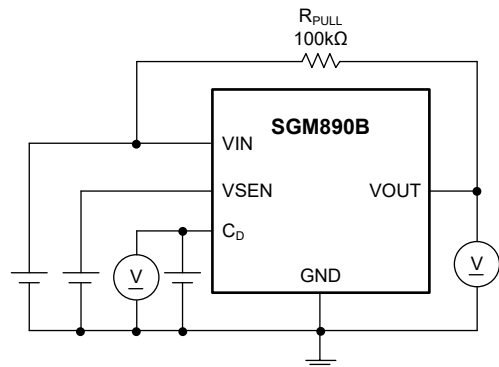
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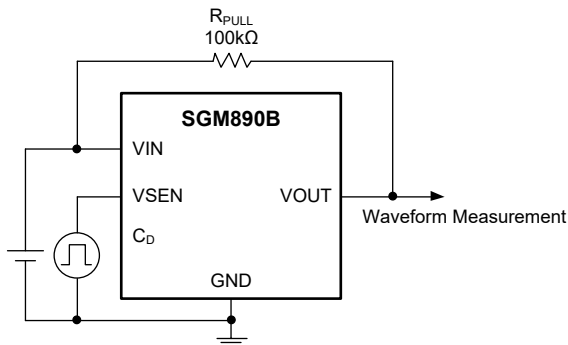
**Test Circuit 4**



**Test Circuit 5**



**Test Circuit 6**

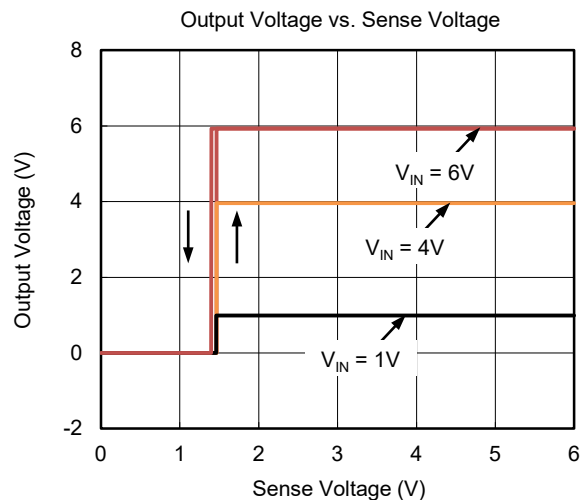
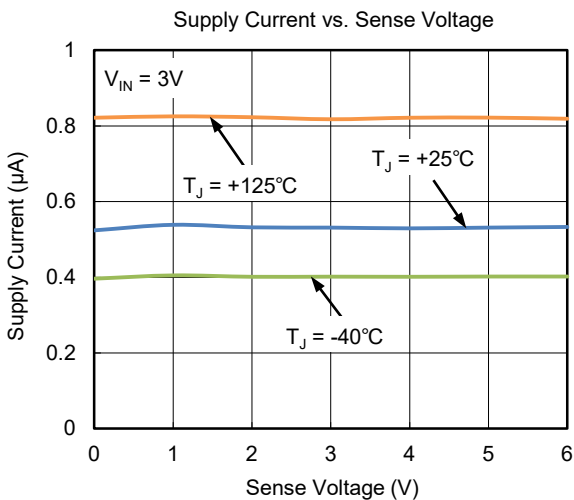
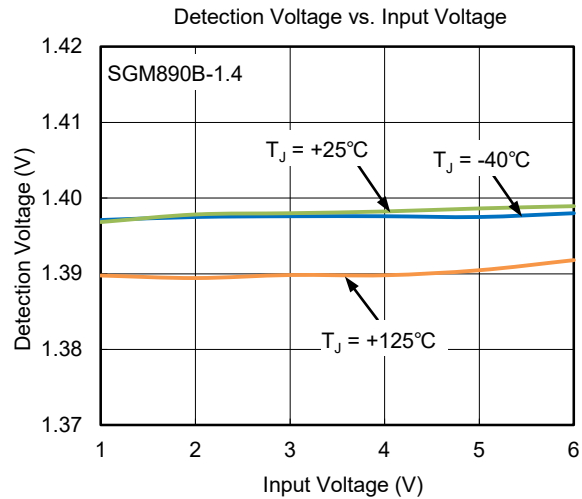
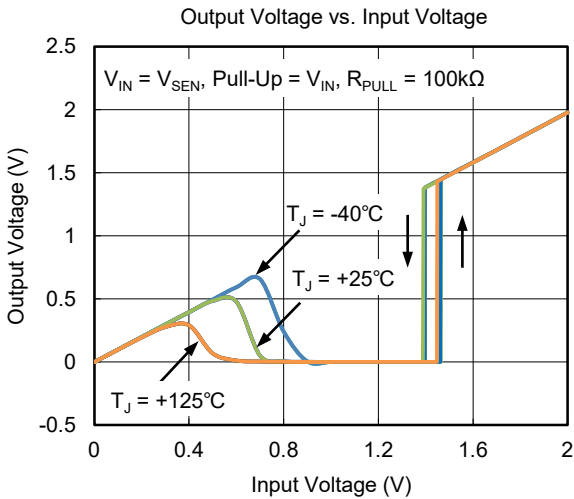
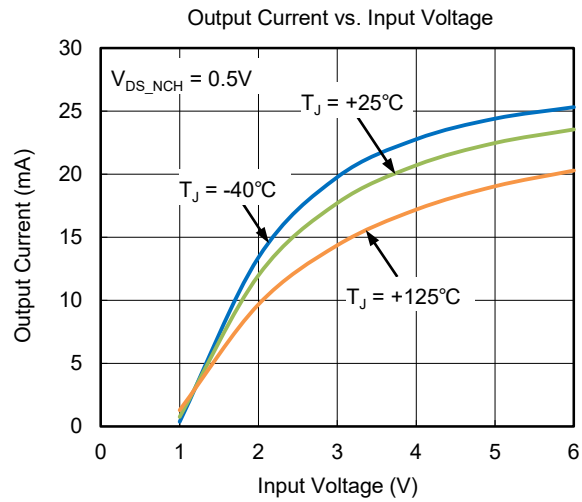
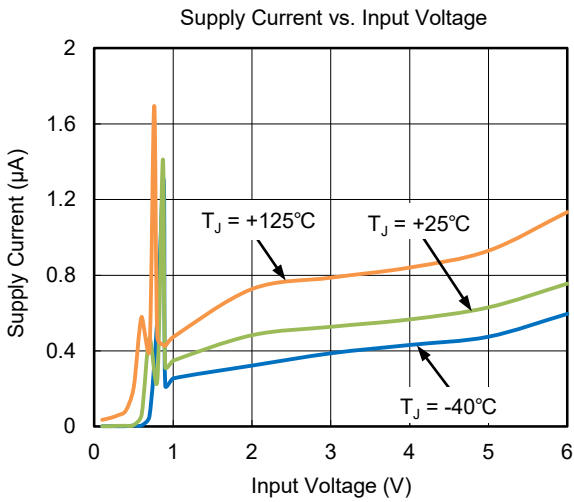


**Test Circuit 7**

# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

## SGM890B/SGM891B

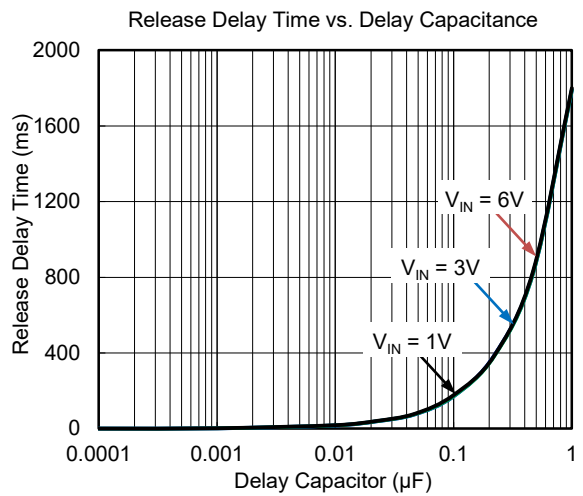
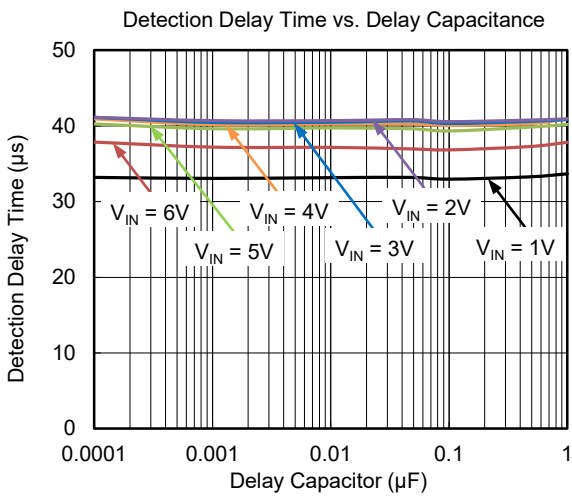
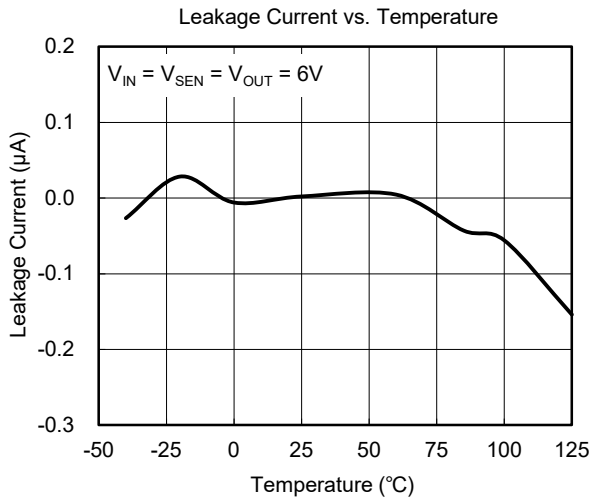
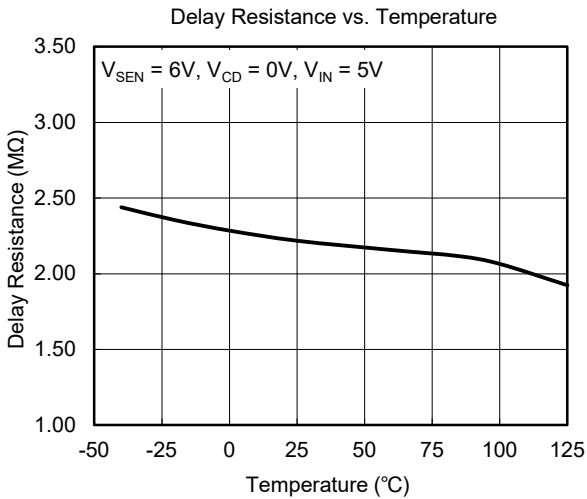
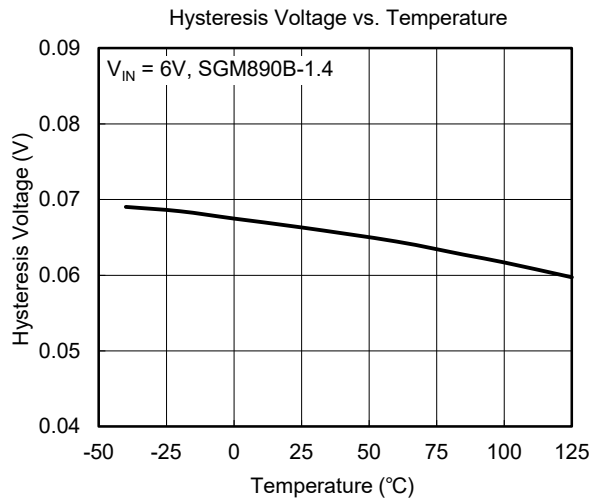
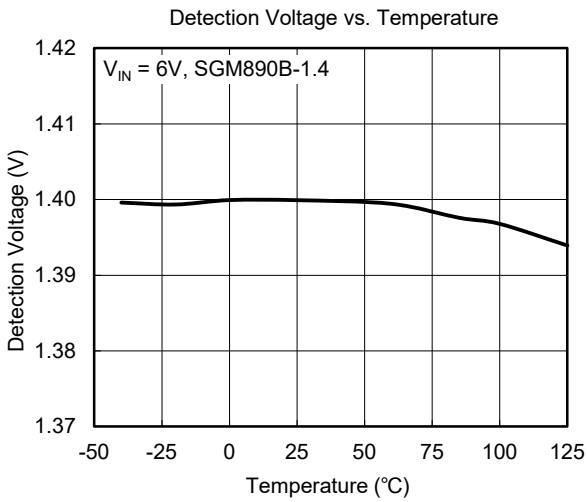
### TYPICAL PERFORMANCE CHARACTERISTICS



# Voltage Detector with Separated Sense Pin and Delay Capacitor Pin

## SGM890B/SGM891B

### TYPICAL PERFORMANCE CHARACTERISTICS (continued)



**REVISION HISTORY**

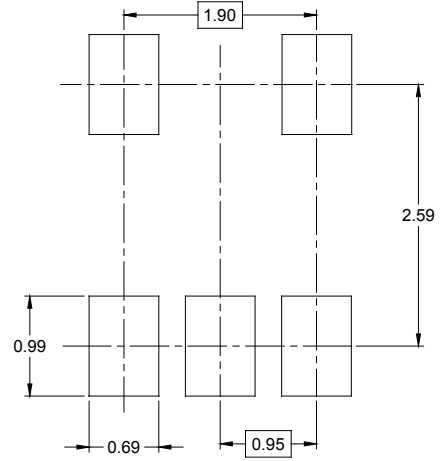
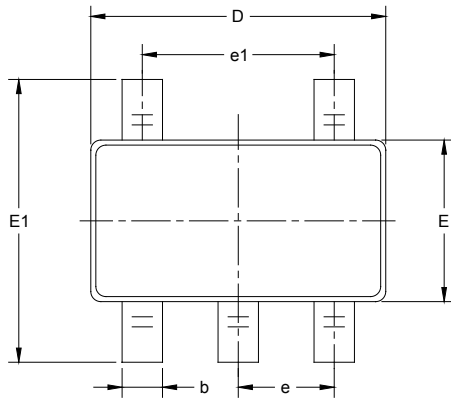
NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

<b>Changes from Original (JUNE 2021) to REV.A</b>	<b>Page</b>
Changed from product preview to production data.....	All

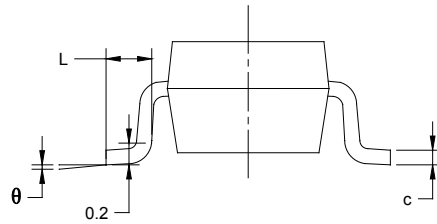
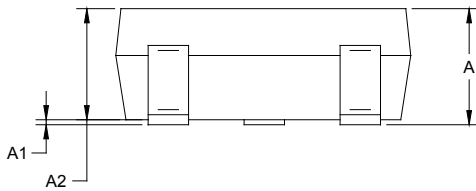
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PACKAGE OUTLINE DIMENSIONS

SOT-23-5



RECOMMENDED LAND PATTERN (Unit: mm)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 BSC		0.037 BSC	
e1	1.900 BSC		0.075 BSC	
L	0.300	0.600	0.012	0.024
$\theta$	0°	8°	0°	8°

# PACKAGE INFORMATION

## TAPE AND REEL INFORMATION

### REEL DIMENSIONS



### TAPE DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

### KEY PARAMETER LIST OF TAPE AND REEL

Package Type	Reel Diameter	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P0 (mm)	P1 (mm)	P2 (mm)	W (mm)	Pin1 Quadrant
SOT-23-5	7"	9.5	3.20	3.20	1.40	4.0	4.0	2.0	8.0	Q3

000001

# PACKAGE INFORMATION

## CARTON BOX DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

## KEY PARAMETER LIST OF CARTON BOX

Reel Type	Length (mm)	Width (mm)	Height (mm)	Pizza/Carton
7" (Option)	368	227	224	8
7"	442	410	224	18

DD0002