

# SEIKO INSTRUMENTS Voltage Regulators



Power Management  
Seiko Instruments

RoHS Compliant This product is RoHS compliant.

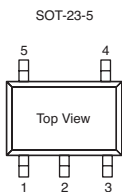
## SII ● LOW DROP OUT VOLTAGE REGULATORS (CONT.)

### S-1323 Series

The S-1323 series is a positive voltage regulator with a low dropout voltage, high output voltage accuracy, and low current consumption developed based on CMOS technology. A built-in low on-resistance transistor provides a low dropout voltage and large output current, and a built-in overcurrent protector prevents the load current from exceeding the current capacitance of the output transistor. An ON/OFF circuit ensures a long battery life. Compared with the voltage regulators using the conventional CMOS process, a larger variety of capacitors are available, including small ceramic capacitors. A small SC-82AB package realizes high-density mounting.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Dropout Voltage (V)(Typ.)	Output Current (Min)(mA)	Accuracy (%)	Current Consumption (uA)(Typ.)	Input Voltage (V)(Max.)	Price Each					
									1	100	500	1000		
<b>Surface Mount</b>														
<b>628-1323B15NB-G</b>	S-1323B15NB-N8ATFG	SC-82AB	1.5	0.500	150	±1	70	6.5	.46	.42	.38	.32		
<b>628-1323B18NB-G</b>	S-1323B18NB-N8DTFG	SC-82AB	1.8	0.500	150	±1	70	6.5	.46	.42	.38	.32		
<b>628-1323B25NB-G</b>	S-1323B25NB-N8KTFG	SC-82AB	2.5	0.500	150	±1	70	6.5	.46	.42	.38	.32		
<b>628-1323B30NB-G</b>	S-1323B30NB-N8PTFG	SC-82AB	3.0	0.500	150	±1	70	6.5	.46	.42	.38	.32		
<b>628-1323B33NB-G</b>	S-1323B33NB-N8STFG	SC-82AB	3.3	0.500	150	±1	70	6.5	.46	.42	.38	.32		
<b>628-1323B50NB-G</b>	S-1323B50NB-N9JTFG	SC-82AB	5.0	0.500	150	±1	70	6.5	.46	.42	.38	.32		



### S-L2980 Series

The S-L2980 series is a low dropout voltage regulator designed for use in battery powered devices and developed using CMOS technology. On-chip low on-resistance on-resistance transistor can provide low dropout voltage and large output current. A power-off switch ensures long battery life. Various types of output capacitors can be used in the S-L2980 series compared with the former CMOS voltage regulators. A small ceramic capacitor can also be used.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Dropout Voltage (V)(Typ.)	Output Current (Min)(mA)	Accuracy (%)	Current Consumption (uA)(Typ.)	Input Voltage (V)(Max.)	Price Each					
									1	100	500	1000		
<b>Surface Mount</b>														
<b>628-L2980A18MC-G</b>	S-L2980A18MC-C6D-TF-G	SOT-23-5	1.8	0.160	150	±2	90	10	.51	.46	.411	.351		
<b>628-L2980A25MC-G</b>	S-L2980A25MC-C6K-TF-G	SOT-23-5	2.5	0.130	150	±2	90	10	.51	.46	.411	.351		
<b>628-L2980A30MC-G</b>	S-L2980A30MC-C6P-TF-G	SOT-23-5	3.0	0.120	150	±2	90	10	.51	.46	.41	.35		
<b>628-L2980A33MC-G</b>	S-L2980A33MC-C6S-TF-G	SOT-23-5	3.3	0.110	150	±2	90	10	.51	.46	.41	.35		
<b>628-L2980A40MC-G</b>	S-L2980A40MC-C6Z-TF-G	SOT-23-5	4.0	0.110	150	±2	90	10	.51	.46	.41	.35		
<b>628-L2980A50MC-G</b>	S-L2980A50MC-C7J-TF-G	SOT-23-5	5.0	0.110	150	±2	90	10	.51	.46	.411	.351		

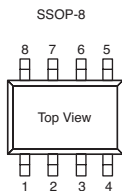
## SII ● PWM CONTROLLED STEP-UP SWITCHING REGULATORS

### S-8330 Series

The S-8330 Series is a CMOS PWM control step-up switching regulator which mainly consists of a reference voltage source, an oscillation circuit, a power MOSFET and an error amplifier. The new output voltage can adjust by a built-in electronic volume circuit and is equipped with a shutdown function. It is a low current consumption device because of the CMOS structure. A step-up switching regulator can be constructed by externally connecting only a coil, a capacitor and a diode.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Maximum Duty Ratio (%)	Oscillation Frequency (kHz) (Typ.)	Current Consumption		Price Each		
						Operating (uA) (Typ.)	Shutdown (uA) (Max.)	1	100	500
<b>Surface Mount</b>										
<b>628-8330A24FS-G</b>	S-8330A24FS-T2-G	SSOP-8	2.4	72.0	180.0	100.0	1.0	1.76	1.58	1.41



### S-8351 Series, PFM

The S-8351 Series is a CMOS PFM-controlled step-up switching regulator that mainly consists of a reference voltage source, an oscillator, and a comparator. The PFM controller allows the duty ratio to be automatically switched according to the load (light load: 50%, high output current: 75%), enabling products with a low ripple over a wide range, high efficiency, and high output current. With the S-8351 Series, a step-up switching regulator can be configured by using an external coil, capacitor, and diode. The built-in MOSFET is turned off by a protection circuit when the voltage at the CONT pin exceeds the limit to prevent it from being damaged. This feature, along with the mini package and low current consumption, makes the S-8351 Series ideal for applications such as the power supply unit of portable equipment.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Maximum Duty Ratio (%)	Oscillation Frequency (kHz) (Typ.)	Current Consumption		Price Each		
						Operating (uA) (Typ.)	Shutdown (uA) (Max.)	1	100	500
<b>628-8351A30MC-G</b>	S-8351A30MC-J2PT2G	SOT-23-5	3.0	±2.4%	100.0	23.2	0.5	.60	.54	.48
<b>628-8351A33MC-G</b>	S-8351A33MC-J2ST2G	SOT-23-5	3.3	±2.4%	100.0	23.2	0.5	.60	.54	.48

### S-8353 Series, PWM

The S-8353 Series is a CMOS step-up switching regulator which mainly consists of a reference voltage source, an oscillation circuit, a power MOSFET, an error amplifier, a phase compensation circuit and a PWM controller. The step-up switching regulator can be configured simply by attaching a coil, capacitor, and diode externally. In addition to the above features, the small package and low power consumption of this series make it ideal for portable device applications requiring high efficiency. The S-8353 Series realizes low ripple, high efficiency, and excellent transient characteristics due to its PWM controller, which can vary the duty ratio linearly from 0% to 83%, optimally-designed error amplifier, and phase compensation circuits.

For quantities greater than listed, call for quote.

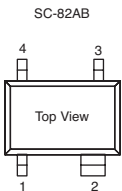
MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Maximum Duty Ratio (%)	Oscillation Frequency (kHz) (Typ.)	Current Consumption		Price Each		
						Operating (uA) (Typ.)	Shutdown (uA) (Max.)	1	100	500
<b>628-8353A27MC-G</b>	S-8353A27MC-IQMT2G	SOT-23-5	2.7	±2.4%	50.0	13.3	0.5	.60	.54	.48
<b>628-8353A50MC-G</b>	S-8353A50MC-IRJT2G	SOT-23-5	5.0	±2.4%	50.0	31.0	0.5	.60	.54	.48

### S-8354 Series, PWM/PFM

The S-8354 Series is a CMOS step-up switching regulator which mainly consists of a reference voltage source, an oscillation circuit, a power MOSFET, an error amplifier, a phase compensation circuit, and a PWM/PFM switching controller. The step-up switching regulator can be configured simply by attaching a coil, capacitor, and diode externally. In addition to the above features, the small package and low power consumption of this series make it ideal for portable device applications requiring high efficiency. The PWM/PFM switching controller that can switch the operation to a PFM controller with a duty ratio is 15% under a light load to prevent a decline in the efficiency due to the IC operating current.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Maximum Duty Ratio (%)	Oscillation Frequency (kHz) (Typ.)	Current Consumption		Price Each		
						Operating (uA) (Typ.)	Shutdown (uA) (Max.)	1	100	500
<b>628-8354H30MC-G</b>	S-8354H30MC-JWPT2G	SOT-23-5	3.0	±2.4%	250.0	18.7	0.5	.60	.54	.48
<b>628-8354A33MC-G</b>	S-8354A33MC-JQST2G	SOT-23-5	3.3	±2.4%	50.0	18.7	0.5	.60	.54	.48
<b>628-8354A50MC-G</b>	S-8354A50MC-JRJT2G	SOT-23-5	5.0	±2.4%	50.0	31.0	0.5	.60	.54	.48



## SII ● S-8521 SERIES, PWM/PFM CONTROLLED STEP-DOWN SWITCHING REGULATOR/CONTROLLERS

The S-8521 Series consists of a CMOS step-down switching regulator/controllers with PWM/PFM-switched control. These devices contain a reference voltage source, oscillation circuit, error amplifier and other components. It works in either PWM control or PFM control and can switch from one to the other. It normally operates using PWM control with a duty ratio of 25% to 100%, but under a light load, it automatically switches to PFM control with a duty ratio of 25%. This ensures high efficiency over a wide range of conditions, from standby mode to operation of peripheral equipment. With the addition of an external P-Channel MOSFET or PNP transistor, a coil, capacitors and a diode connected externally, these can function as step-down switching regulators.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Seiko Part No.	Package Type	Output Voltage (V)	Maximum Duty Ratio (%)	Oscillation Frequency (kHz) (Typ.)	Current Consumption		Price Each		
						Operating (uA) (Typ.)	Shutdown (uA) (Max.)	1	100	500
<b>628-8521A30MC-G</b>	S-8521A30MC-AXPT2G	SOT-23-5	3.0	10.0	180.0	35.0	0.5	.76	.68	.61
<b>628-8521A33MC-G</b>	S-8521A33MC-AXST2G	SOT-23-5	3.3	10.0	180.0	35.0	0.5	.76	.68	.61
<b>628-8521A50MC-G</b>	S-8521A50MC-AYJT2G	SOT-23-5	5.0	10.0	180.0	35.0	0.5	.76	.68	.61