

## ABSOLUTE MAXIMUM RATINGS

These are stress ratings only and functional operation of the device at these ratings or any other above those indicated in the operation sections of the specifications below is not implied. Exposure to absolute maximum rating conditions for extended periods of time may affect reliability.

Input Voltage  $V_{IN}$  ..... 6.5V  
 Enable Pin Input Voltage ..... -0.3 to  $V_{IN}+0.3V$   
 Output Current..... 300mA  
 Junction Temperature ..... 150°C  
 Storage Temperature Range ..... -65°C to 150°C  
 Lead Soldering (Sold. 10sec) ..... 260°C  
 ESD Rating (HBM - Human Body Model) ..... 2kV  
 ESD Rating (MM - Machine Model) ..... 200V

## OPERATING RATINGS

Input Voltage Range  $V_{IN}$ ..... 2.0 to 6.0V  
 Junction Temperature Range  $T_J$ ..... -40°C to 85°C  
 Thermal Resistance  $\theta_{JA}$  ..... 250°C/W  
 Thermal Resistance  $\theta_{JC}$  ..... 74°C/W

## ELECTRICAL SPECIFICATIONS

Specifications with standard type are for an Operating Junction Temperature of  $T_J = 25^\circ\text{C}$  only; limits applying over the full Operating Junction Temperature range of -40°C to 85°C are denoted by a “•”. Minimum and Maximum limits are guaranteed through test, design, or statistical correlation. Typical values represent the most likely parametric norm at  $T_J = 25^\circ\text{C}$ , and are provided for reference purposes only.

### SP6260HEK (1.2V) 1.2V version is obsolete

Unless otherwise indicated,  $V_{IN} = 2.2V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min.  | Typ.      | Max.  | Units            | Conditions                                              |
|----------------------------------------|-------|-----------|-------|------------------|---------------------------------------------------------|
| Output Voltage $V_{OUT}$               | 1.176 | 1.2       | 1.224 | V                | $V_{IN}=2.2V$<br>$1mA \leq I_{OUT} \leq 30mA$           |
| Input Voltage $V_{IN}$                 |       |           | 6     | V                |                                                         |
| Output Current $I_{OUT}$               | 200   |           |       | mA               | $V_{IN}-V_{OUT}=1V$                                     |
| Load Regulation $V_{RLOAD}$            |       | 12        | 40    | mV               | $V_{IN}=2.2V$<br>$1mA \leq I_{OUT} \leq 80mA$           |
| Line Regulation $V_{RLINE}$            |       | 4         | 16    | mV               | $2.2V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$            |
| Dropout Voltage $V_{DROP}$             |       | 700       | 900   | mV               | $I_{OUT}=10mA$                                          |
|                                        |       | 700       | 900   |                  | $I_{OUT}=100mA$                                         |
|                                        |       | 700       | 900   |                  | $I_{OUT}=150mA$                                         |
|                                        |       | 700       | 900   |                  | $I_{OUT}=200mA$                                         |
| Quiescent Current $I_Q$                |       | 25        | 50    | $\mu A$          | $V_{IN}=2.2V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |       | 0.1       | 1     | $\mu A$          | $V_{IN}=2.2V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |       | 70        |       | dB               | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |       | $\pm 120$ |       | $\mu V/^\circ C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |       | $\pm 100$ |       | ppm/ $^\circ C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |
| Short Current Limit $I_{LIMIT}$        |       | 50        |       | mA               | $V_{OUT}=0V$                                            |
| RMS Output Noise $V_{NOISE}$           |       | 30        |       | $\mu V_{rms}$    | $T_A=25^\circ C$<br>$10Hz \leq f \leq 100kHz$           |
| CE “High” Voltage                      | 1.5   |           |       | V                | CE input voltage “High”                                 |
| CE “Low” Voltage                       |       |           | 0.25  | V                | CE input voltage “Low”                                  |
| CE Pull-down Resistance $R_{PD}$       | 2.5   | 5         | 10    | M $\Omega$       |                                                         |

**SP6260AEK (1.5V) 1.5V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 2.5V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min. | Typ.      | Max. | Units             | Conditions                                              |
|----------------------------------------|------|-----------|------|-------------------|---------------------------------------------------------|
| Output Voltage $V_{OUT}$               | 1.47 | 1.5       | 1.53 | V                 | $V_{IN}=2.5V$<br>$1mA \leq I_{OUT} \leq 30mA$           |
| Input Voltage $V_{IN}$                 |      |           | 6    | V                 |                                                         |
| Output Current $I_{OUT}$               | 200  |           |      | mA                | $V_{IN}-V_{OUT}=1V$                                     |
| Load Regulation $V_{RLOAD}$            |      | 12        | 40   | mV                | $V_{IN}=2.5V$<br>$1mA \leq I_{OUT} \leq 80mA$           |
| Line Regulation $V_{RLINE}$            |      | 4         | 16   | mV                | $2.3V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$            |
| Dropout Voltage $V_{DROP}$             |      | 400       | 600  | mV                | $I_{OUT}=10mA$                                          |
|                                        |      | 400       | 600  |                   | $I_{OUT}=100mA$                                         |
|                                        |      | 400       | 600  |                   | $I_{OUT}=150mA$                                         |
|                                        |      | 400       | 600  |                   | $I_{OUT}=200mA$                                         |
| Quiescent Current $I_Q$                |      | 25        | 50   | $\mu A$           | $V_{IN}=2.5V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |      | 0.1       | 1    | $\mu A$           | $V_{IN}=2.5V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |      | 70        |      | dB                | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |      | $\pm 150$ |      | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |      | $\pm 100$ |      | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |
| Short Current Limit $I_{LIMIT}$        |      | 50        |      | mA                | $V_{OUT}=0V$                                            |
| RMS Output Noise $V_{NOISE}$           |      | 30        |      | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$          |
| CE "High" Voltage                      | 1.5  |           |      | V                 | CE input voltage "High"                                 |
| CE "Low" Voltage                       |      |           | 0.25 | V                 | CE input voltage "Low"                                  |
| CE Pull-down Resistance $R_{PD}$       | 2.5  | 5         | 10   | M $\Omega$        |                                                         |

**SP6260BEK (1.8V) 1.8V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 2.8V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min.  | Typ.      | Max.  | Units             | Conditions                                              |
|----------------------------------------|-------|-----------|-------|-------------------|---------------------------------------------------------|
| Output Voltage $V_{OUT}$               | 1.764 | 1.8       | 1.836 | V                 | $V_{IN}=2.8V$<br>$1mA \leq I_{OUT} \leq 30mA$           |
| Input Voltage $V_{IN}$                 |       |           | 6     | V                 |                                                         |
| Output Current $I_{OUT}$               | 200   |           |       | mA                | $V_{IN}-V_{OUT}=1V$                                     |
| Load Regulation $V_{RLOAD}$            |       | 12        | 40    | mV                | $V_{IN}=2.8V$<br>$1mA \leq I_{OUT} \leq 80mA$           |
| Line Regulation $V_{RLINE}$            |       | 4         | 16    | mV                | $2.3V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$            |
| Dropout Voltage $V_{DROP}$             |       | 20        | 40    | mV                | $I_{OUT}=10mA$                                          |
|                                        |       | 150       | 300   |                   | $I_{OUT}=100mA$                                         |
|                                        |       | 200       | 400   |                   | $I_{OUT}=150mA$                                         |
|                                        |       | 250       | 500   |                   | $I_{OUT}=200mA$                                         |
| Quiescent Current $I_Q$                |       | 25        | 50    | $\mu A$           | $V_{IN}=2.8V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |       | 0.1       | 1     | $\mu A$           | $V_{IN}=2.8V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |       | 70        |       | dB                | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |       | $\pm 180$ |       | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |       | $\pm 100$ |       | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |

|                                  |     |    |      |               |                                                |
|----------------------------------|-----|----|------|---------------|------------------------------------------------|
| Short Current Limit $I_{LIMIT}$  |     | 50 |      | mA            | $V_{OUT}=0V$                                   |
| RMS Output Noise $V_{NOISE}$     |     | 30 |      | $\mu V_{rms}$ | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$ |
| CE "High" Voltage                | 1.5 |    |      | V             | CE input voltage "High"                        |
| CE "Low" Voltage                 |     |    | 0.25 | V             | CE input voltage "Low"                         |
| CE Pull-down Resistance $R_{PD}$ | 2.5 | 5  | 10   | $M\Omega$     |                                                |

**SP6260CEK (2.5V) 2.5V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 3.5V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min. | Typ.      | Max. | Units             | Conditions                                              |
|----------------------------------------|------|-----------|------|-------------------|---------------------------------------------------------|
| Output Voltage $V_{OUT}$               | 2.45 | 2.5       | 2.55 | V                 | $V_{IN}=3.5V$<br>$1mA \leq I_{OUT} \leq 30mA$           |
| Input Voltage $V_{IN}$                 |      |           | 6    | V                 |                                                         |
| Output Current $I_{OUT}$               | 200  |           |      | mA                | $V_{IN}-V_{OUT}=1V$                                     |
| Load Regulation $V_{RLOAD}$            |      | 12        | 40   | mV                | $V_{IN}=3.5V$<br>$1mA \leq I_{OUT} \leq 80mA$           |
| Line Regulation $V_{RLINE}$            |      | 4         | 16   | mV                | $3.0V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$            |
| Dropout Voltage $V_{DROP}$             |      | 20        | 40   | mV                | $I_{OUT}=10mA$                                          |
|                                        |      | 150       | 300  |                   | $I_{OUT}=100mA$                                         |
|                                        |      | 200       | 400  |                   | $I_{OUT}=150mA$                                         |
|                                        |      | 250       | 500  |                   | $I_{OUT}=200mA$                                         |
| Quiescent Current $I_Q$                |      | 25        | 50   | $\mu A$           | $V_{IN}=3.5V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |      | 0.1       | 1    | $\mu A$           | $V_{IN}=3.5V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |      | 70        |      | dB                | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |      | $\pm 250$ |      | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |      | $\pm 100$ |      | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |
| Short Current Limit $I_{LIMIT}$        |      | 50        |      | mA                | $V_{OUT}=0V$                                            |
| RMS Output Noise $V_{NOISE}$           |      | 30        |      | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$          |
| CE "High" Voltage                      | 1.5  |           |      | V                 | CE input voltage "High"                                 |
| CE "Low" Voltage                       |      |           | 0.25 | V                 | CE input voltage "Low"                                  |
| CE Pull-down Resistance $R_{PD}$       | 2.5  | 5         | 10   | $M\Omega$         |                                                         |

**SP6260DEK (2.8V) 2.8V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 3.8V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                   | Min.  | Typ. | Max.  | Units | Conditions                                    |
|-----------------------------|-------|------|-------|-------|-----------------------------------------------|
| Output Voltage $V_{OUT}$    | 2.744 | 2.8  | 2.856 | V     | $V_{IN}=3.8V$<br>$1mA \leq I_{OUT} \leq 30mA$ |
| Input Voltage $V_{IN}$      |       |      | 6     | V     |                                               |
| Output Current $I_{OUT}$    | 200   |      |       | mA    | $V_{IN}-V_{OUT}=1V$                           |
| Load Regulation $V_{RLOAD}$ |       | 12   | 40    | mV    | $V_{IN}=3.8V$<br>$1mA \leq I_{OUT} \leq 80mA$ |
| Line Regulation $V_{RLINE}$ |       | 4    | 16    | mV    | $3.3V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$  |
| Dropout Voltage $V_{DROP}$  |       | 20   | 40    | mV    | $I_{OUT}=10mA$                                |
|                             |       | 150  | 300   |       | $I_{OUT}=100mA$                               |
|                             |       | 200  | 400   |       | $I_{OUT}=150mA$                               |
|                             |       | 250  | 500   |       | $I_{OUT}=200mA$                               |

**200mA RF Low Noise LDO Regulator**

|                                        |     |           |      |                   |                                                         |
|----------------------------------------|-----|-----------|------|-------------------|---------------------------------------------------------|
| Quiescent Current $I_Q$                |     | 25        | 50   | $\mu A$           | $V_{IN}=3.8V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |     | 0.1       | 1    | $\mu A$           | $V_{IN}=3.8V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |     | 70        |      | dB                | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |     | $\pm 280$ |      | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |     | $\pm 100$ |      | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |
| Short Current Limit $I_{LIMIT}$        |     | 50        |      | mA                | $V_{OUT}=0V$                                            |
| RMS Output Noise $V_{NOISE}$           |     | 30        |      | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$          |
| CE "High" Voltage                      | 1.5 |           |      | V                 | CE input voltage "High"                                 |
| CE "Low" Voltage                       |     |           | 0.25 | V                 | CE input voltage "Low"                                  |
| CE Pull-down Resistance $R_{PD}$       | 2.5 | 5         | 10   | M $\Omega$        |                                                         |

**SP6260EEK (3.0V) 3.0V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 4.0V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min.  | Typ.      | Max.  | Units             | Conditions                                              |
|----------------------------------------|-------|-----------|-------|-------------------|---------------------------------------------------------|
| Output Voltage $V_{OUT}$               | 2.940 | 3.0       | 3.060 | V                 | $V_{IN}=4.0V$<br>$1mA \leq I_{OUT} \leq 30mA$           |
| Input Voltage $V_{IN}$                 |       |           | 6     | V                 |                                                         |
| Output Current $I_{OUT}$               | 200   |           |       | mA                | $V_{IN}-V_{OUT}=1V$                                     |
| Load Regulation $V_{RLOAD}$            |       | 12        | 40    | mV                | $V_{IN}=4.0V$<br>$1mA \leq I_{OUT} \leq 80mA$           |
| Line Regulation $V_{RLINE}$            |       | 4         | 16    | mV                | $3.5V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$            |
| Dropout Voltage $V_{DROP}$             |       | 20        | 40    | mV                | $I_{OUT}=10mA$                                          |
|                                        |       | 150       | 300   |                   | $I_{OUT}=100mA$                                         |
|                                        |       | 200       | 400   |                   | $I_{OUT}=150mA$                                         |
|                                        |       | 250       | 500   |                   | $I_{OUT}=200mA$                                         |
| Quiescent Current $I_Q$                |       | 25        | 50    | $\mu A$           | $V_{IN}=4.0V, I_{OUT}=0mA$                              |
| Standby Current $I_{STD}$              |       | 0.1       | 1     | $\mu A$           | $V_{IN}=4.0V$<br>$V_{CE}$ in OFF mode                   |
| Power Supply Rejection Ratio PSRR      |       | 70        |       | dB                | Ripple 0.5V <sub>p-p</sub> , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |       | $\pm 300$ |       | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                             |
|                                        |       | $\pm 100$ |       | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$                   |
| Short Current Limit $I_{LIMIT}$        |       | 50        |       | mA                | $V_{OUT}=0V$                                            |
| RMS Output Noise $V_{NOISE}$           |       | 30        |       | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$          |
| CE "High" Voltage                      | 1.5   |           |       | V                 | CE input voltage "High"                                 |
| CE "Low" Voltage                       |       |           | 0.25  | V                 | CE input voltage "Low"                                  |
| CE Pull-down Resistance $R_{PD}$       | 2.5   | 5         | 10    | M $\Omega$        |                                                         |

**SP6260FEK (3.2V) 3.2V version is obsolete**

Unless otherwise indicated,  $V_{IN} = 4.2V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                | Min.  | Typ. | Max.  | Units | Conditions                                    |
|--------------------------|-------|------|-------|-------|-----------------------------------------------|
| Output Voltage $V_{OUT}$ | 3.136 | 3.2  | 3.264 | V     | $V_{IN}=4.2V$<br>$1mA \leq I_{OUT} \leq 30mA$ |
| Input Voltage $V_{IN}$   |       |      | 6     | V     |                                               |
| Output Current $I_{OUT}$ | 200   |      |       | mA    | $V_{IN}-V_{OUT}=1V$                           |

**200mA RF Low Noise LDO Regulator**

|                                        |     |           |      |                   |                                                  |
|----------------------------------------|-----|-----------|------|-------------------|--------------------------------------------------|
| Load Regulation $V_{RLOAD}$            |     | 12        | 40   | mV                | $V_{IN}=4.2V$<br>$1mA \leq I_{OUT} \leq 80mA$    |
| Line Regulation $V_{RLINE}$            |     | 4         | 16   | mV                | $3.7V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$     |
| Dropout Voltage $V_{DROP}$             |     | 20        | 40   | mV                | $I_{OUT}=10mA$                                   |
|                                        |     | 150       | 300  |                   | $I_{OUT}=100mA$                                  |
|                                        |     | 200       | 400  |                   | $I_{OUT}=150mA$                                  |
|                                        |     | 250       | 500  |                   | $I_{OUT}=200mA$                                  |
| Quiescent Current $I_Q$                |     | 25        | 50   | $\mu A$           | $V_{IN}=4.2V, I_{OUT}=0mA$                       |
| Standby Current $I_{STD}$              |     | 0.1       | 1    | $\mu A$           | $V_{IN}=4.2V$<br>$V_{CE}$ in OFF mode            |
| Power Supply Rejection Ratio PSRR      |     | 70        |      | dB                | Ripple $0.5V_{p-p}$ , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |     | $\pm 320$ |      | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                      |
|                                        |     | $\pm 100$ |      | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$            |
| Short Current Limit $I_{LIMIT}$        |     | 50        |      | mA                | $V_{OUT}=0V$                                     |
| RMS Output Noise $V_{NOISE}$           |     | 30        |      | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$   |
| CE "High" Voltage                      | 1.5 |           |      | V                 | CE input voltage "High"                          |
| CE "Low" Voltage                       |     |           | 0.25 | V                 | CE input voltage "Low"                           |
| CE Pull-down Resistance $R_{PD}$       | 2.5 | 5         | 10   | $M\Omega$         |                                                  |

**SP6260GEK (3.3V) Available**

Unless otherwise indicated,  $V_{IN} = 4.3V$ ,  $C_{IN} = 1\mu F$ ,  $C_{OUT} = 1\mu F$ .

| Parameter                              | Min.  | Typ.      | Max.  | Units             | Conditions                                       |
|----------------------------------------|-------|-----------|-------|-------------------|--------------------------------------------------|
| Output Voltage $V_{OUT}$               | 3.234 | 3.3       | 3.366 | V                 | $V_{IN}=4.3V$<br>$1mA \leq I_{OUT} \leq 30mA$    |
| Input Voltage $V_{IN}$                 |       |           | 6     | V                 |                                                  |
| Output Current $I_{OUT}$               | 200   |           |       | mA                | $V_{IN}-V_{OUT}=1V$                              |
| Load Regulation $V_{RLOAD}$            |       | 12        | 40    | mV                | $V_{IN}=4.3V$<br>$1mA \leq I_{OUT} \leq 80mA$    |
| Line Regulation $V_{RLINE}$            |       | 4         | 16    | mV                | $3.8V \leq V_{IN} \leq 6V$<br>$I_{OUT}=30mA$     |
| Dropout Voltage $V_{DROP}$             |       | 20        | 40    | mV                | $I_{OUT}=10mA$                                   |
|                                        |       | 150       | 300   |                   | $I_{OUT}=100mA$                                  |
|                                        |       | 200       | 400   |                   | $I_{OUT}=150mA$                                  |
|                                        |       | 250       | 500   |                   | $I_{OUT}=200mA$                                  |
| Quiescent Current $I_Q$                |       | 25        | 50    | $\mu A$           | $V_{IN}=4.3V, I_{OUT}=0mA$                       |
| Standby Current $I_{STD}$              |       | 0.1       | 1     | $\mu A$           | $V_{IN}=4.3V$<br>$V_{CE}$ in OFF mode            |
| Power Supply Rejection Ratio PSRR      |       | 70        |       | dB                | Ripple $0.5V_{p-p}$ , $f=10kHz$<br>$V_{IN}=2.5V$ |
| Output Voltage Temperature Coefficient |       | $\pm 330$ |       | $\mu V/^{\circ}C$ | • $\Delta V_{OUT}/\Delta T$                      |
|                                        |       | $\pm 100$ |       | ppm/ $^{\circ}C$  | • $(\Delta V_{OUT}/V_{OUT})/\Delta T$            |
| Short Current Limit $I_{LIMIT}$        |       | 50        |       | mA                | $V_{OUT}=0V$                                     |
| RMS Output Noise $V_{NOISE}$           |       | 30        |       | $\mu V_{rms}$     | $T_A=25^{\circ}C$<br>$10Hz \leq f \leq 100kHz$   |
| CE "High" Voltage                      | 1.5   |           |       | V                 | CE input voltage "High"                          |
| CE "Low" Voltage                       |       |           | 0.25  | V                 | CE input voltage "Low"                           |
| CE Pull-down Resistance $R_{PD}$       | 2.5   | 5         | 10    | $M\Omega$         |                                                  |

## BLOCK DIAGRAM

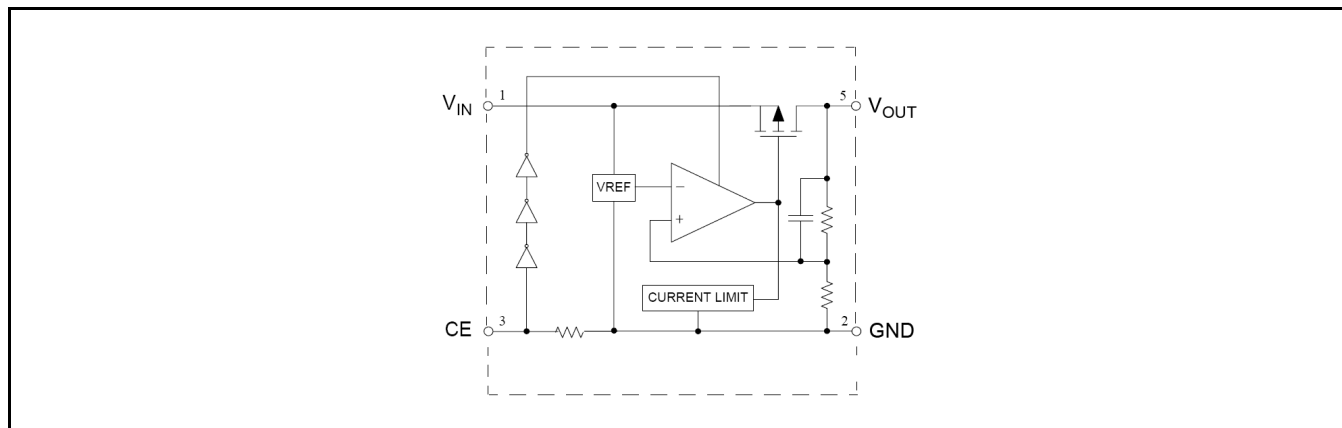


Fig. 2: SP6260 Block Diagram

## PIN ASSIGNMENT

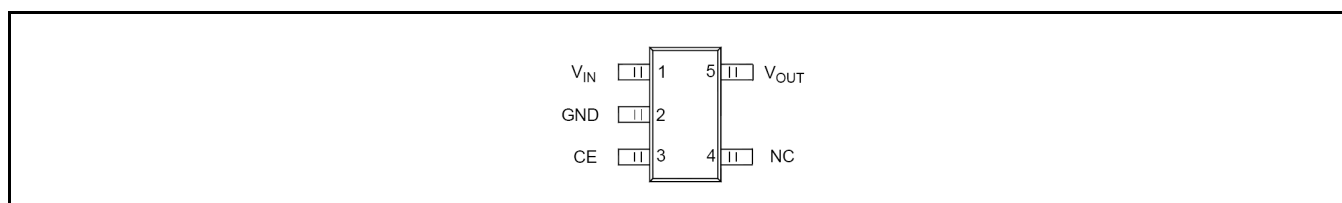


Fig. 3: SP6260 Pin Assignment

## PIN DESCRIPTION

| Name      | Pin Number | Description                                      |
|-----------|------------|--------------------------------------------------|
| $V_{IN}$  | 1          | Input voltage                                    |
| GND       | 2          | Ground                                           |
| CE        | 3          | Enable input pin.<br>high=enable<br>low=shutdown |
| NC        | 4          | No connection                                    |
| $V_{OUT}$ | 5          | Regulated output voltage                         |

## ORDERING INFORMATION<sup>(1)</sup>

| Part Number    | Junction Temperature Range | Package  | Packing Method | Lead free <sup>(2)</sup> | Note 1       |
|----------------|----------------------------|----------|----------------|--------------------------|--------------|
| SP6260GEK-L/TR | -40°C to +85°C             | SOT-23-5 | Tape & Reel    | Yes                      | 3.3V version |

Notes:

1. Refer to [www.maxlinear.com/SP6260](http://www.maxlinear.com/SP6260) for most up-to-date Ordering Information.
2. Visit [www.maxlinear.com](http://www.maxlinear.com) for additional information on Environmental Rating.

## TYPICAL PERFORMANCE CHARACTERISTICS

All data taken at  $V_{IN} = 2.7V$  to  $5.5V$ ,  $T_J = T_A = 25^\circ C$ , unless otherwise specified - Schematic and BOM from Application Information section of this datasheet.

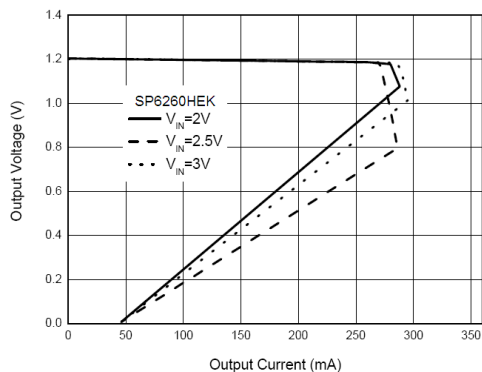


Fig. 4: Output Voltage vs. Output Current  
SP6260HEK (1.2V)

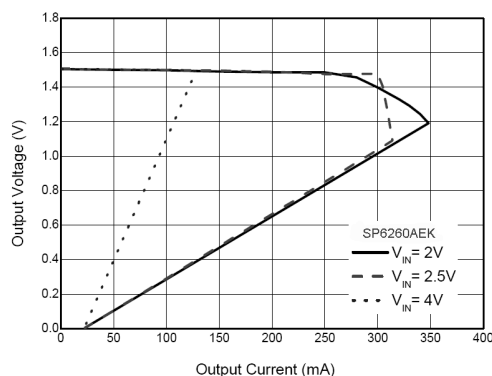


Fig. 5: Output Voltage vs. Output Current  
SP6260AEK (1.5V)

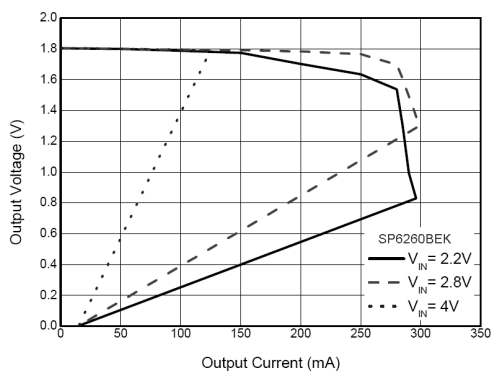


Fig. 6: Output Voltage vs. Output Current  
SP6260BEK (1.8V)

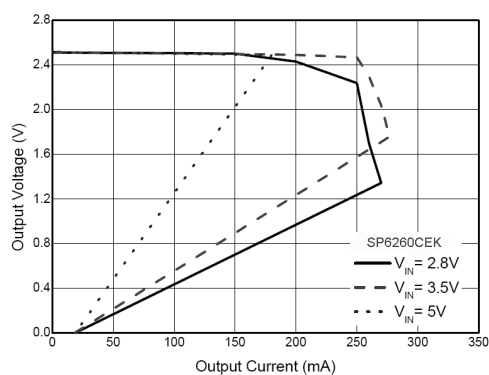


Fig. 7: Output Voltage vs. Output Current  
SP6260CEK (2.5V)

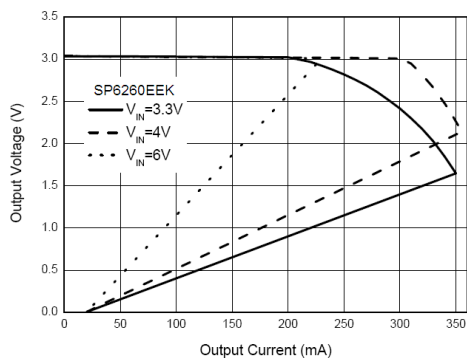


Fig. 8: Output Voltage vs. Output Current  
SP6260EEK (3.0V)

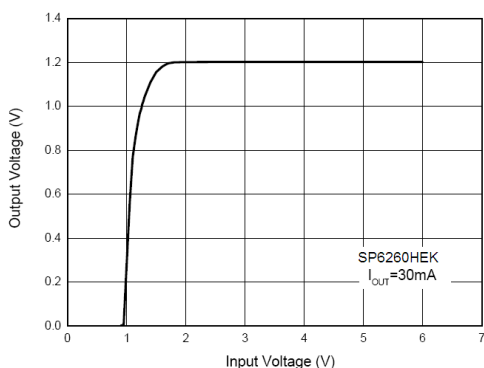


Fig. 9: Output Voltage vs. Input Voltage  
SP6260HEK (1.2V)

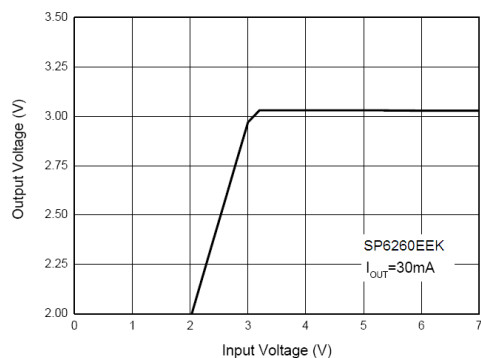


Fig. 10: Output Voltage vs. Input Voltage  
SP6260EEK (3.0V)

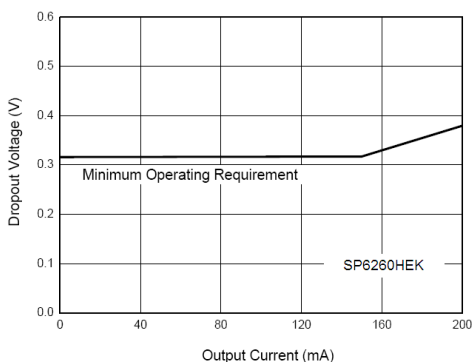


Fig. 11: Dropout Voltage vs. Output Current  
SP6260HEK-L (1.2V)

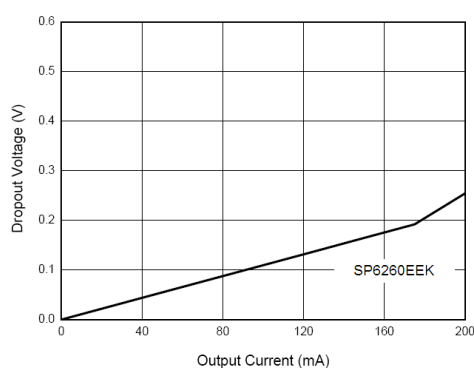


Fig. 12: Dropout Voltage vs. Output Current  
SP6260EEK-L (3.0V)

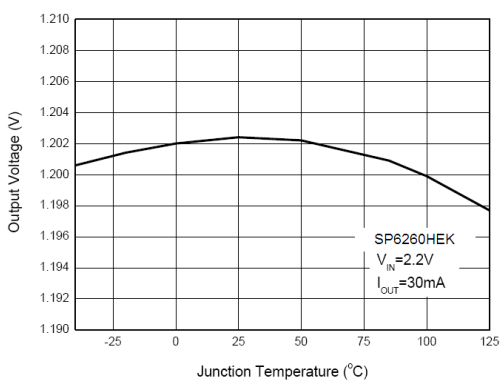


Fig. 13: Output Voltage vs. Junction Temperature  
SP6260HEK-L (1.2V)

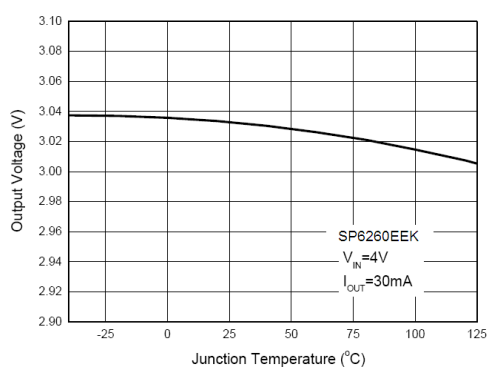


Fig. 14: Output Voltage vs. Junction Temperature  
SP6260EEK-L (3.0V)

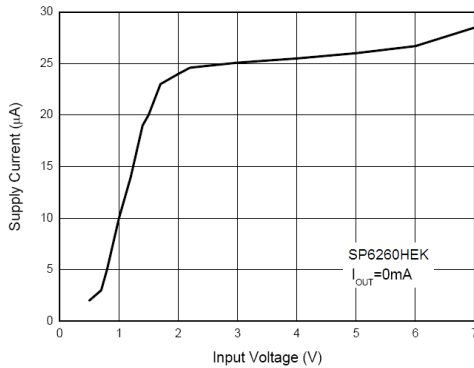


Fig. 15: Supply Current vs. Input Voltage  
SP6260HEK (1.2V)

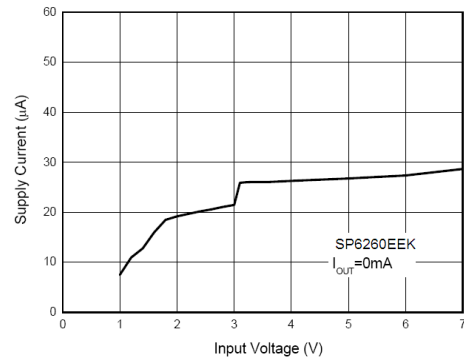


Fig. 16: Supply Current vs. Input Voltage  
SP6260EEK (3.0V)

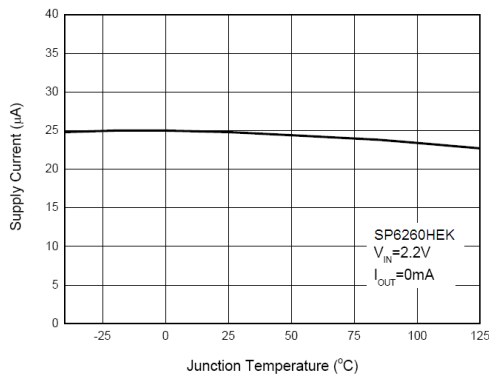


Fig. 17: Supply Current vs. Junction Temperature  
SP6260HEK (1.2V)

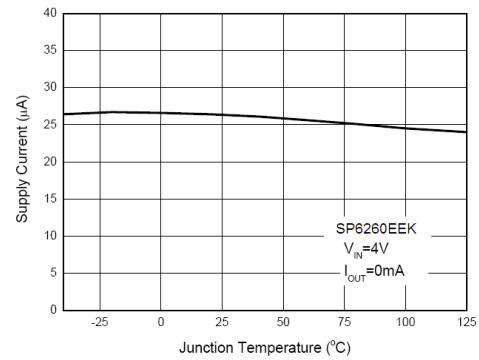


Fig. 18: Supply Current vs. Junction Temperature  
SP6260EEK (3.0V)

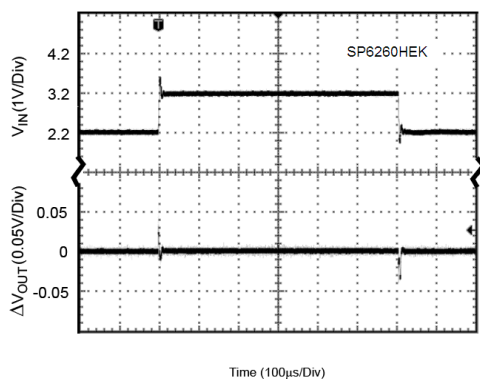


Fig. 19: Line Transient SP6260HEK (1.2V)  
(Conditions:  $I_{OUT}=30mA$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=1\mu F$ )

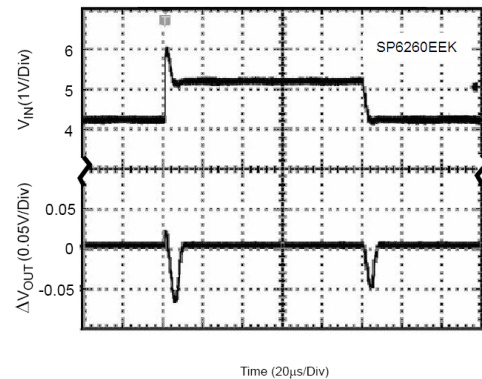


Fig. 20: Line Transient SP6260EEK (3.0V)  
(Conditions:  $I_{OUT}=30mA$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=1\mu F$ )

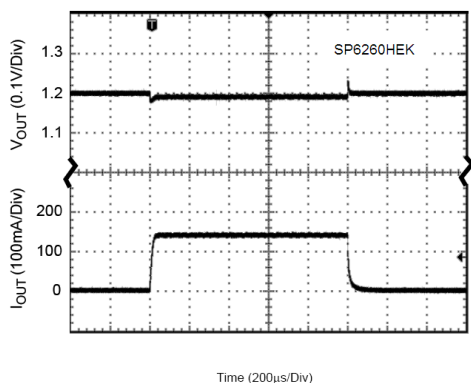


Fig. 21: Line Transient SP6260HEK (1.2V)  
(Conditions:  $V_{IN}=2.5V$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=1\mu F$ )

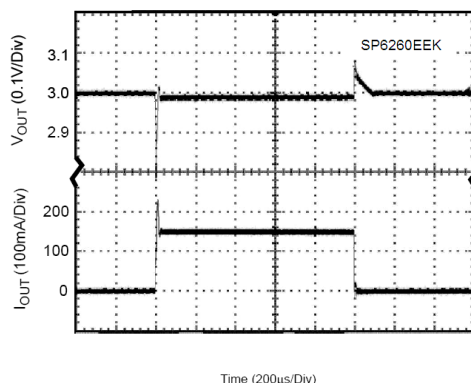


Fig. 22: Line Transient SP6260EEK (3.0V)  
(Conditions:  $V_{IN}=4V$ ,  $C_{IN}=1\mu F$ ,  $C_{OUT}=1\mu F$ )

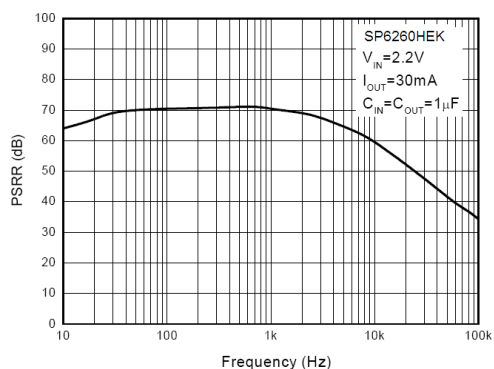


Fig. 23: PSRR vs. Frequency  
SP6260HEK (1.2V)

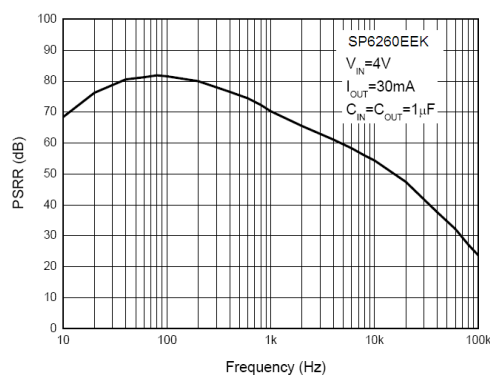
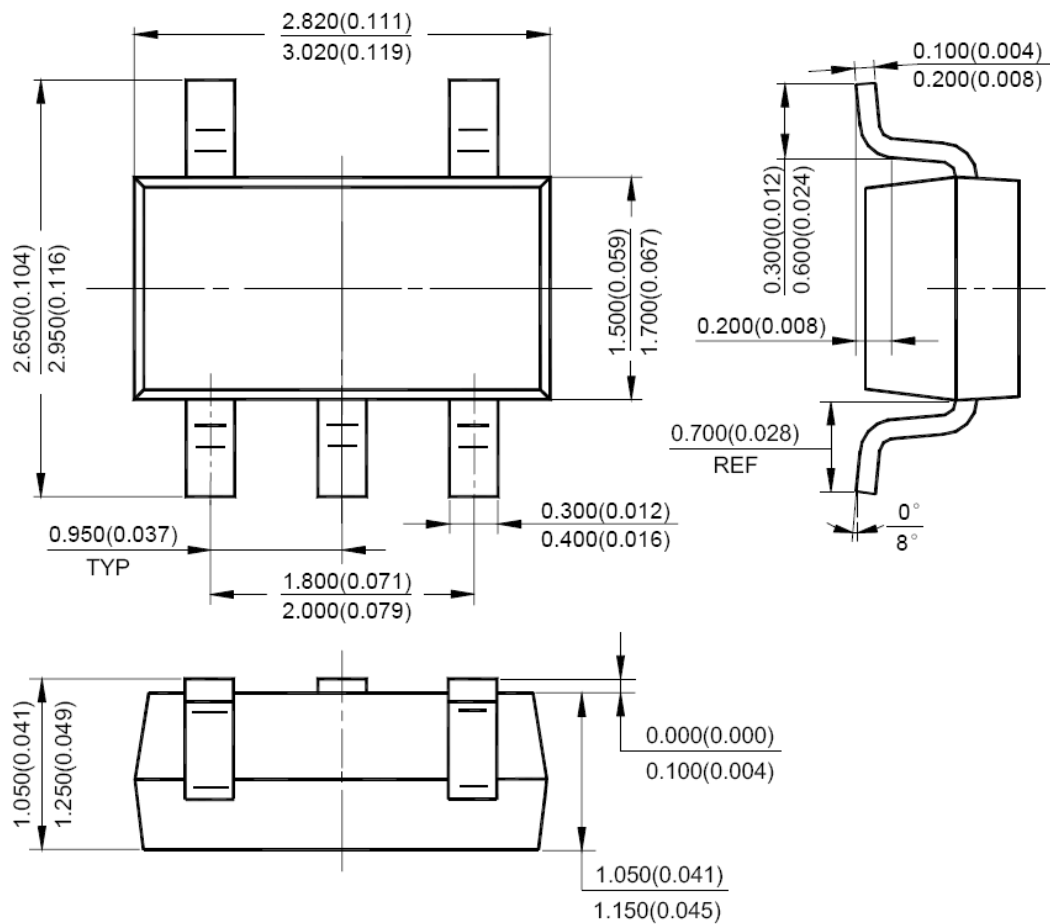


Fig. 21: PSRR vs. Frequency  
SP6260EEK (3.0V)

**PACKAGE SPECIFICATION**
**5-PIN SOT-23**

Unit: mm (inch)



**REVISION HISTORY**

| Revision | Date       | Description                                                                                                                                               |
|----------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.1      |            | Initial Data Sheet                                                                                                                                        |
| 2.0.0    | 10/27/2010 | Reformat of datasheet<br>Increased output current capabilities to 200mA<br>Removal of 1.5V version curves<br>Addition of the 1.2V version data and curves |
| 2.1.0    | 01/26/2011 | Corrected Electrical tables $V_{OUT}$ range for SP6260E, SP6260F and SP6260G<br>Addition of "Output Current vs Output Voltage" curves figures 5, 6 and 7. |
| 2.1.1    | 01/24/20   | Updated to MaxLinear logo. Updated Ordering Information.                                                                                                  |

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