SGM25666
5.5V, 10A, 4mΩ On-Resistance Load Switch

GENERAL DESCRIPTION

The SGM25666 is a small single channel load switch with 4mΩ (TYP) on-resistance. The device can operate over a wide input voltage range of 0.1V to 5.5V. It can support a 10A maximum continuous load current and is controlled by the ON pin. The rise time can be programmed by setting an additional capacitor to the SS pin and can also be used to avoid inrush current. There is an open-drain pin, power good (PG) is set to high when the soft-start period is finished.

The device has thermal shutdown function. When the junction temperature exceeds +170℃, the inner N-MOSFET will be turned off through the thermal shutdown circuitry, and will remain off until the die temperature drops below +150℃. The SGM25666 offers the quick output discharge function in disable status and the t_F of the output can be programmed through an external resistor.

The SGM25666 is available in a Green UTQFN-1.5×2-10L package.

FEATURES

- **Single Channel Load Switch**
- **VIN Voltage Range: 0.1V to 5.5V**
- **VBIAS Voltage Range: 1.5V to 5.5V**
- **Maximum Continuous Current: 10A**
- **On-Resistance: 4mΩ (TYP)**
- **Programmable Output Ramp Time**
- **Programmable Quick Output Discharge (QOD)**
- **Open-Drain Power Good (PG) Signal**
- **Low Power Consumption:**
  - **On-State (I_Q): 10μA (TYP)**
  - **Off-State (I_{SD}): 0.1μA (TYP)**
- **Thermal Shutdown**
- **Smart ON Pin Pull-Down, R_{PD_ON}**

APPLICATIONS

Industrial PC
Solid State Drive
PC and Notebook
Optical Module

SIMPLIFIED SCHEMATIC

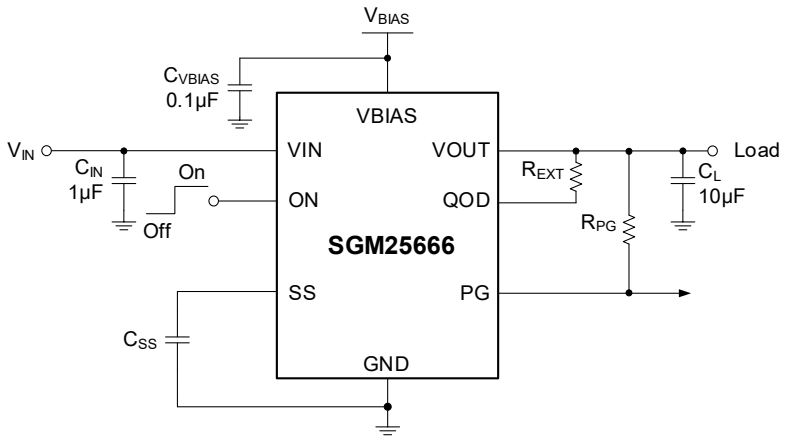


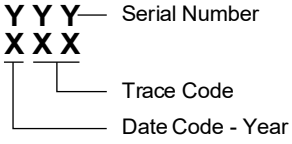
Figure 1. Simplified Schematic

PACKAGE/ORDERING INFORMATION

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM25666	UTQFN-1.5×2-10L	-40℃ to +125℃	SGM25666XUWX10G/TR	1Y6 XXX	Tape and Reel, 3000

MARKING INFORMATION

NOTE: XXX = Date Code, Trace Code.



Green (RoHS & HSF): SG Micro Corp defines "Green" to mean Pb-Free (RoHS compatible) and free of halogen substances. If you have additional comments or questions, please contact your SGMICRO representative directly.

ABSOLUTE MAXIMUM RATINGS

Input Voltage, V_{IN} ..... -0.3V to 6V
Bias Voltage, V_{BIAS} ..... -0.3V to 6V
Control Pin Voltage, V_{ON}, V_{PG}, V_{QOD}, V_{SS} ..... -0.3V to 6V
Maximum Current, I_{MAX} 10A
Package Thermal Resistance
UTQFN-1.5×2-10L, θ_{JA} ..... 74.6℃/W
UTQFN-1.5×2-10L, θ_{JB} ..... 5.2℃/W
UTQFN-1.5×2-10L, θ_{JC} ..... 62.7℃/W
Junction Temperature ..... +150℃
Storage Temperature Range ..... -65℃ to +150℃
Lead Temperature (Soldering, 10s) ..... +260℃
ESD Susceptibility (1) (2)
HBM ..... ±4000V
CDM ..... ±1000V

NOTES:

1. For human body model (HBM), all pins comply with ANSI/ESDA/JEDEC JS-001 specifications.
2. For charged device model (CDM), all pins comply with ANSI/ESDA/JEDEC JS-002 specifications.

RECOMMENDED OPERATING CONDITIONS

Input Voltage, V_{IN} ..... 0.1V to 5.5V
Bias Voltage, V_{BIAS} ..... 1.5V to 5.5V
ON Pin High Voltage Range, V_{IH} ..... 0.7V to 5.5V
ON Pin Low Voltage Range, V_{IL} ..... 0V to 0.35V
Control Pin Voltage, V_{PG}, V_{QOD} ..... 0V to 5.5V
Operating Ambient Temperature Range ..... -40℃ to +125℃
Input Capacitor, C_{IN} 1μF
Output Capacitor, C_L 10μF
VBIAS Capacitor, C_{VBIAS} 0.1μF

OVERSTRESS CAUTION

Stresses beyond those listed in Absolute Maximum Ratings may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect reliability. Functional operation of the device at any conditions beyond those indicated in the Recommended Operating Conditions section is not implied.

ESD SENSITIVITY CAUTION

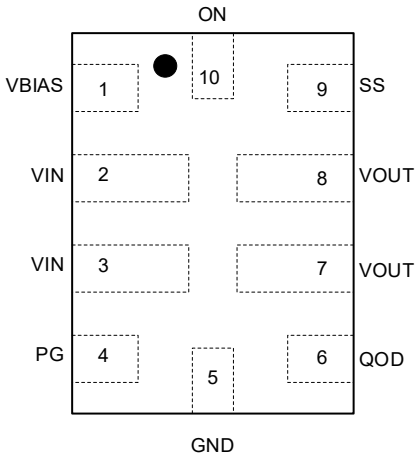
This integrated circuit can be damaged if ESD protections are not considered carefully. SGMICRO recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because even small parametric changes could cause the device not to meet the published specifications.

DISCLAIMER

SG Micro Corp reserves the right to make any change in circuit design, or specifications without prior notice.

PIN CONFIGURATION

SGM25666 (TOP VIEW)



UTQFN-1.5×2-10L

PIN DESCRIPTION

PIN	NAME	FUNCTION
1	VBIAS	Power Supply Pin for Internal Circuitry. V_{BIAS} voltage range is 1.5V to 5.5V.
2, 3	VIN	Switch Input Pin.
4	PG	Power Good Indication. This is an open-drain pin, when the internal channel of the chip is turned on.
5	GND	GND.
6	QOD	Quick Output Discharge Pin.
7, 8	VOUT	Output of the Device.
9	SS	Soft-Start Pin. The capacitor between SS and GND pins will set the slew rate according to the application requirements.
10	ON	Enable Pin.

ELECTRICAL CHARACTERISTICS

(T_J = -40℃ to +125℃, typical values are measured at T_J = +25℃, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{BIAS} = 5V, V_{IN} = 3.3V, unless otherwise noted.						
Power Consumption						
VBIAS Shutdown Current	I_{SD_VBIAS}	V_{ON} = 0V		0.1	1	μA
VBIAS Quiescent Current	I_{Q_VBIAS}	V_{ON} > V_{IH}		10	20	μA
VIN Shutdown Current	I_{SD_VIN}	V_{ON} = 0V		0.1	2	μA
ON Pin Leakage Current	I_{ON}	V_{ON} = V_{BIAS}		0.1		μA
Performance						
On-Resistance	R_{DSON}	V_{IN} = 5V		4	7	mΩ
		V_{IN} = 3.3V		4	7	
		V_{IN} = 1.8V		4	7	
		V_{IN} = 1.2V		4	7	
		V_{IN} = 0.8V		4	7	
Power Good V_{OL}	V_{OL_PG}	I_{PG} = 1mA			0.2	V
Smart Pull-Down Resistance	R_{PD_ON}			550	750	kΩ
QOD Resistance	R_{QOD}	V_{BIAS} = V_{IN}, V_{ON} = 0V, I_{QOD} = 1mA sinking		40	57	Ω
Protection						
Thermal Shutdown	T_{SD}			170		℃
Thermal Shutdown Hysteresis	T_{HYS}			20		℃
ON Terminal Input Threshold	V_{IH}	Rising	0.7			V
	V_{IL}	Falling			0.35	
V_{BIAS} = 3.3V, unless otherwise noted.						
Power Consumption						
VBIAS Shutdown Current	I_{SD_VBIAS}	V_{ON} = 0V		0.1	1	μA
VBIAS Quiescent Current	I_{Q_VBIAS}	V_{ON} > V_{IH}		10	20	μA
VIN Shutdown Current	I_{SD_VIN}	V_{ON} = 0V		0.1	2	μA
ON Pin Leakage Current	I_{ON}	V_{ON} = V_{BIAS}		0.1		μA
Performance						
On-Resistance	R_{DSON}	V_{IN} = 3.3V		4	7	mΩ
		V_{IN} = 1.8V		4	7	
		V_{IN} = 1.2V		4	7	
		V_{IN} = 0.8V		4	7	
Power Good V_{OL}	V_{OL_PG}	I_{PG} = 1mA			0.2	V
Smart Pull-Down Resistance	R_{PD_ON}			550	750	kΩ
QOD Resistance	R_{QOD}	V_{BIAS} = V_{IN}, V_{ON} = 0V, I_{QOD} = 1mA sinking		45	60	Ω
Protection						
Thermal Shutdown	T_{SD}			170		℃
Thermal Shutdown Hysteresis	T_{HYS}			20		℃
ON Terminal Input Threshold	V_{IH}	Rising	0.7			V
	V_{IL}	Falling			0.35	

ELECTRICAL CHARACTERISTICS (continued)

(T_J = -40℃ to +125℃, typical values are measured at T_J = +25℃, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{BIAS} = 1.5V, unless otherwise noted.						
Power Consumption						
VBIAS Shutdown Current	I_{SD_VBIAS}	V_{ON} = 0V		0.1	1	μA
VBIAS Quiescent Current	I_{Q_VBIAS}	V_{ON} > V_{IH}		10	22	μA
VIN Shutdown Current	I_{SD_VIN}	V_{ON} = 0V		0.1	2	μA
ON Pin Leakage Current	I_{ON}	V_{ON} = V_{BIAS}		0.1		μA
Performance						
On-Resistance	R_{DSON}	V_{IN} = 1.5V		4	7	mΩ
		V_{IN} = 1.2V		4	7	
		V_{IN} = 0.8V		4	7	
Power Good V_{OL}	V_{OL_PG}	I_{PG} = 1mA			0.2	V
Smart Pull-Down Resistance	R_{PD_ON}			550	750	kΩ
QOD Resistance	R_{QOD}	V_{BIAS} = V_{IN}, V_{ON} = 0V, I_{QOD} = 1mA sinking		55	78	Ω
Protection						
Thermal Shutdown	T_{SD}			170		℃
Thermal Shutdown Hysteresis	T_{HYS}			20		℃
ON Terminal Input Threshold	V_{IH}	Rising	0.7			V
	V_{IL}	Falling			0.35	

SWITCHING CHARACTERISTICS

(V_{BIAS} = 5V, T_J = +25℃, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{IN} = 5V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		1275		μs
V_{OUT} Rise Time	t_R			810		
Delay Time	t_D			460		
V_{OUT} Fall Time	t_F			2235		
Turn-Off Time	t_{OFF}			90		
V_{IN} = 3.3V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		1030		μs
V_{OUT} Rise Time	t_R			585		
Delay Time	t_D			450		
V_{OUT} Fall Time	t_F			2245		
Turn-Off Time	t_{OFF}			95		
V_{IN} = 1.8V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		775		μs
V_{OUT} Rise Time	t_R			340		
Delay Time	t_D			440		
V_{OUT} Fall Time	t_F			2180		
Turn-Off Time	t_{OFF}			100		
V_{IN} = 1.2V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		660		μs
V_{OUT} Rise Time	t_R			225		
Delay Time	t_D			435		
V_{OUT} Fall Time	t_F			2190		
Turn-Off Time	t_{OFF}			105		
V_{IN} = 0.8V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		580		μs
V_{OUT} Rise Time	t_R			145		
Delay Time	t_D			435		
V_{OUT} Fall Time	t_F			2125		
Turn-Off Time	t_{OFF}			115		

SWITCHING CHARACTERISTICS (continued)

(V_{BIAS} = 3.3V, T_J = +25℃, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{IN} = 3.3V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		980		μs
V_{OUT} Rise Time	t_R			600		
Delay Time	t_D			380		
V_{OUT} Fall Time	t_F			2250		
Turn-Off Time	t_{OFF}			95		
V_{IN} = 1.8V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		710		μs
V_{OUT} Rise Time	t_R			345		
Delay Time	t_D			365		
V_{OUT} Fall Time	t_F			2155		
Turn-Off Time	t_{OFF}			100		
V_{IN} = 1.2V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		600		μs
V_{OUT} Rise Time	t_R			230		
Delay Time	t_D			370		
V_{OUT} Fall Time	t_F			2175		
Turn-Off Time	t_{OFF}			110		
V_{IN} = 0.8V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		515		μs
V_{OUT} Rise Time	t_R			150		
Delay Time	t_D			365		
V_{OUT} Fall Time	t_F			2145		
Turn-Off Time	t_{OFF}			120		

SWITCHING CHARACTERISTICS (continued)

(V_{BIAS} = 1.5V, T_J = +25℃, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
V_{IN} = 1.5V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		650		μs
V_{OUT} Rise Time	t_R			290		
Delay Time	t_D			356		
V_{OUT} Fall Time	t_F			2145		
Turn-Off Time	t_{OFF}			105		
V_{IN} = 1.2V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		585		μs
V_{OUT} Rise Time	t_R			230		
Delay Time	t_D			355		
V_{OUT} Fall Time	t_F			2170		
Turn-Off Time	t_{OFF}			110		
V_{IN} = 0.8V						
Turn-On Time	t_{ON}	R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF		500		μs
V_{OUT} Rise Time	t_R			150		
Delay Time	t_D			355		
V_{OUT} Fall Time	t_F			2140		
Turn-Off Time	t_{OFF}			145		

PARAMETER MEASUREMENT INFORMATION

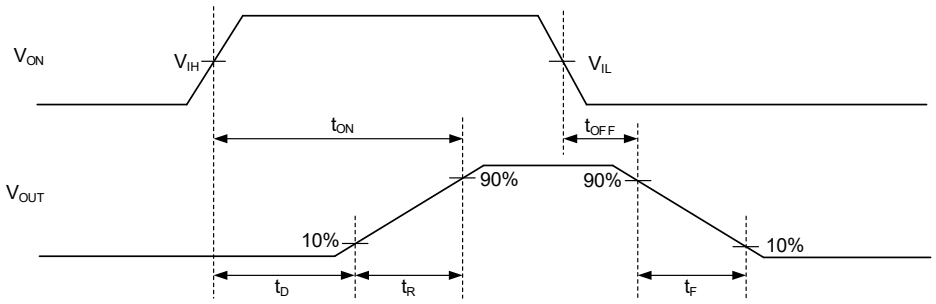


Figure 2. Timing Diagram

FUNCTIONAL BLOCK DIAGRAM

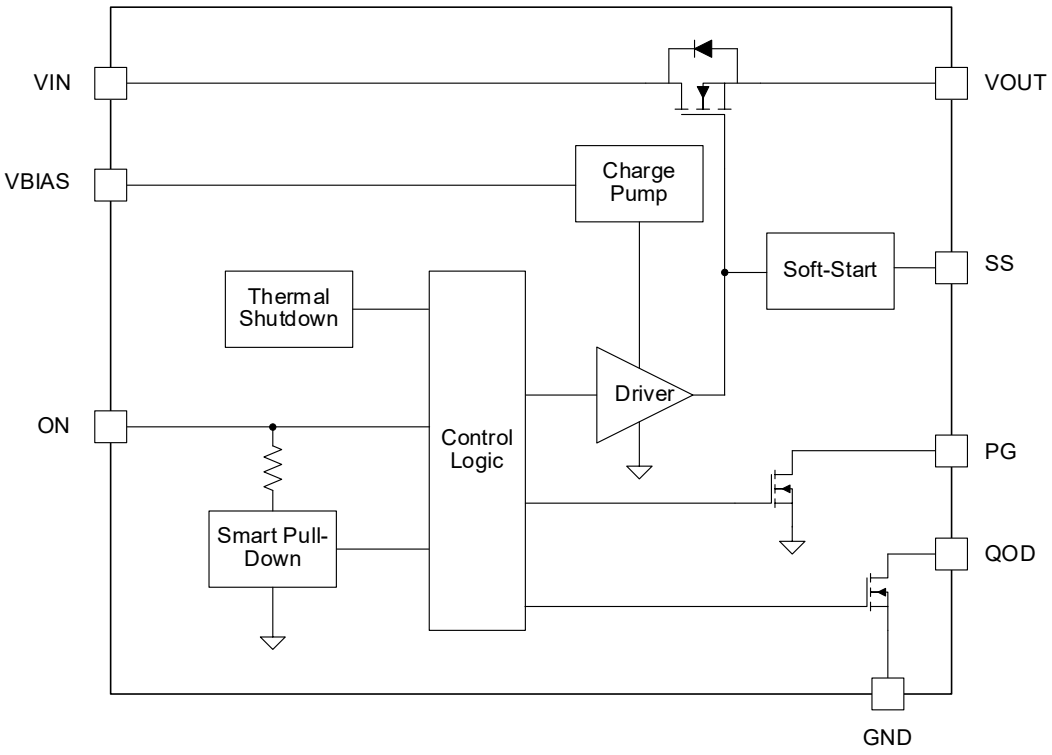
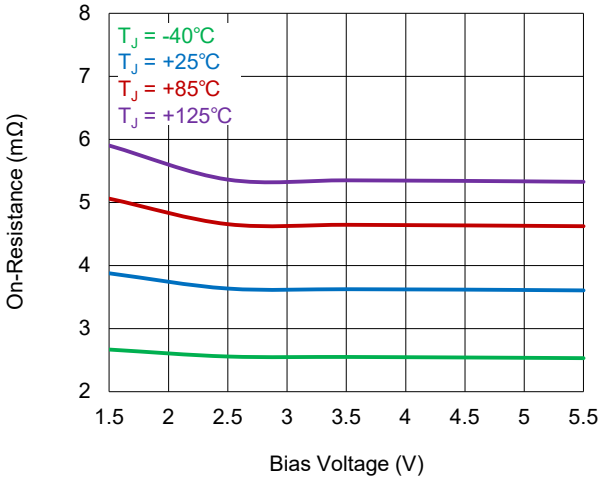


Figure 3. Block Diagram

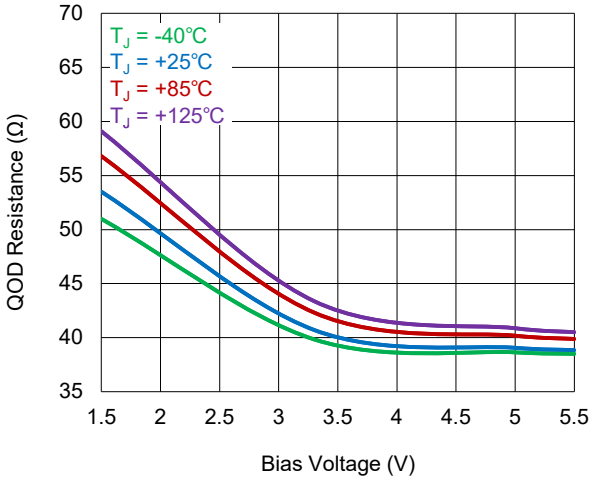
TYPICAL PERFORMANCE CHARACTERISTICS

V_{IN} = V_{BIAS}, T_J = +25℃, unless otherwise noted.

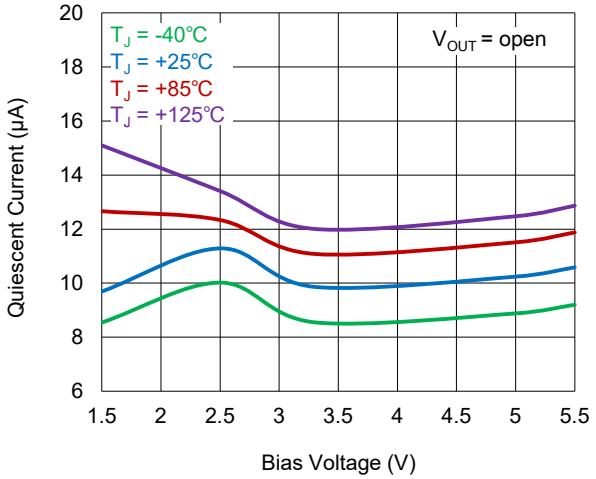
On-Resistance vs. Bias Voltage



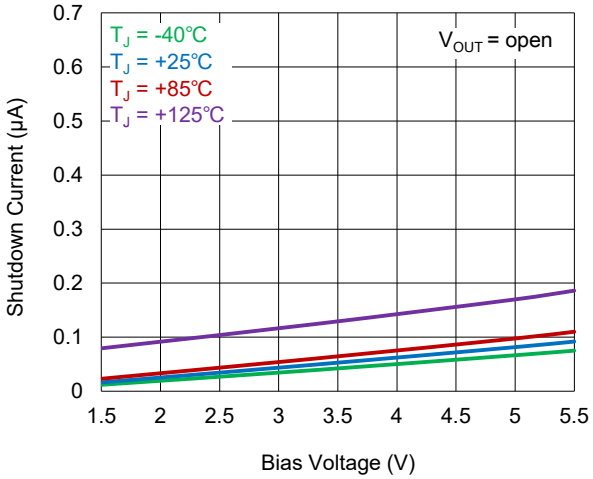
QOD Resistance vs. Bias Voltage



Quiescent Current vs. Bias Voltage



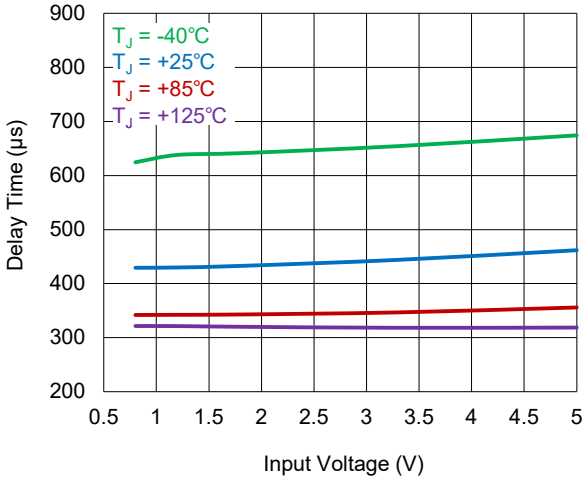
Shutdown Current vs. Bias Voltage



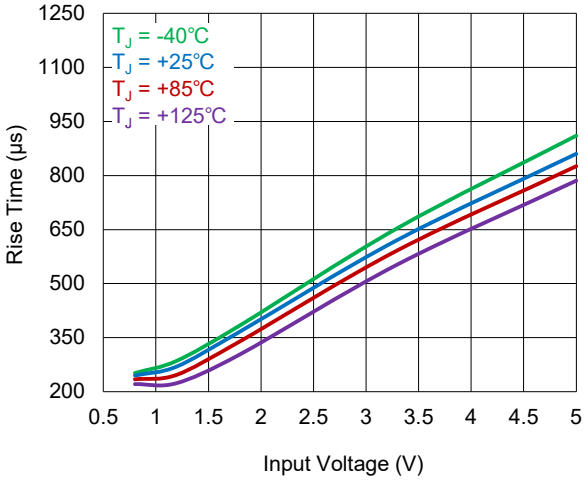
TYPICAL PERFORMANCE CHARACTERISTICS (continued)

V_{BIAS} = 5V, R_L = 100Ω, C_L = 10μF, C_{SS} = 1000pF, T_J = +25℃, unless otherwise noted.

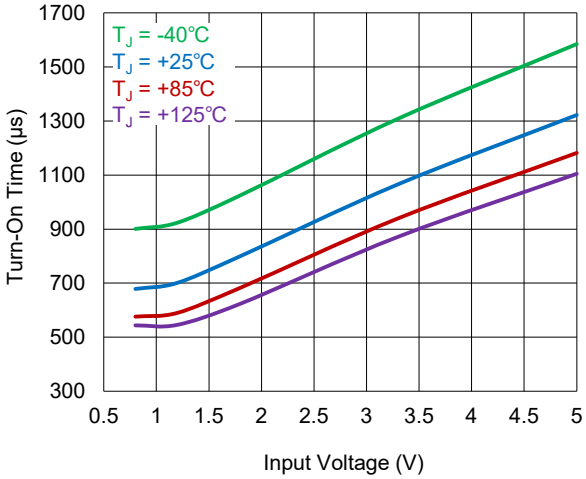
Delay Time vs. Input Voltage



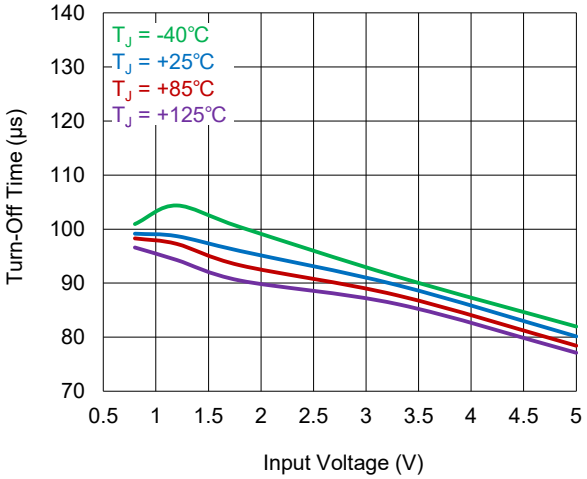
Rise Time vs. Input Voltage



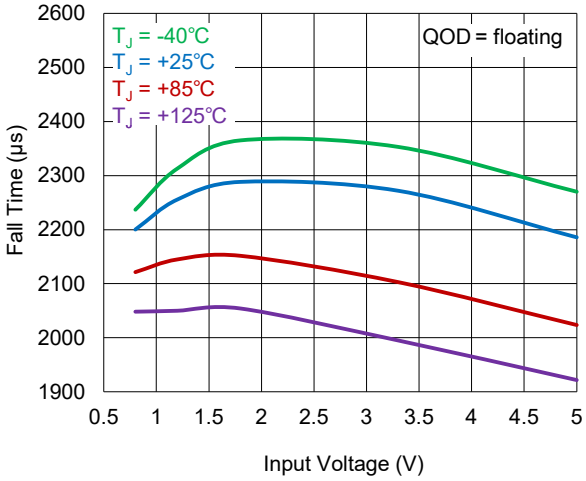
Turn-On Time vs. Input Voltage



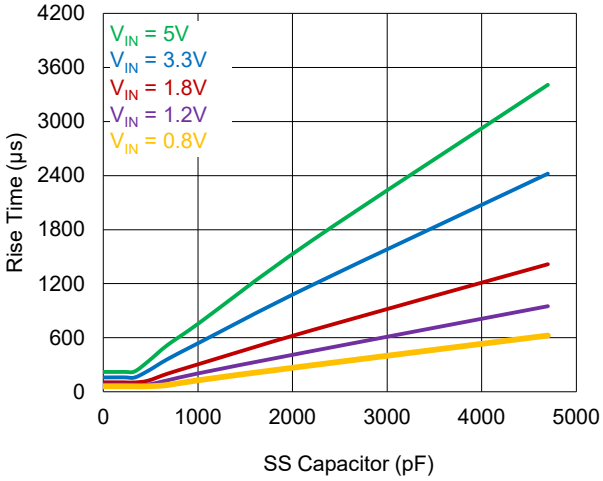
Turn-Off Time vs. Input Voltage



Fall Time vs. Input Voltage



Rise Time vs. SS Capacitor



DETAILED DESCRIPTION

Overview

The SGM25666 is a 5.5V, integrated N-MOSFET, single-channel load switch. It can support a 10A maximum continuous load current and be enabled by the ON pin. The rise time can be programmed by setting an additional capacitor to the SS pin and can also be used to avoid inrush current. The device also has adjustable quick output discharge (QOD) function to remove the remaining energy from the output when the switch is disabled.

The SGM25666 is highly integrated. Using the device can reduce the PCB area and the BOM count greatly, even the cost.

V_{IN} and V_{BIAS} Voltage Range

When V_{IN} < V_{BIAS}, the device gets the best R_{DSON} performance. If V_{IN} > V_{BIAS}, the device will show a larger R_{DSON} than the value in the electrical characteristics table even though it still work. Ensure that V_{IN} and V_{BIAS} are set to appropriate values, otherwise performance will not be guaranteed.

Control Pin

There is a control pin ON to turn on or turn off the corresponding N-MOSFET. When the ON pin is driven high, the switch will be turned on, and when the ON pin is driven low, the switch will be turned off. The ON pin is compatible with standard GPIO logic level threshold, such as 0.7V or higher GPIO voltage.

Quick Output Discharge (QOD)

The SGM25666 integrates the output discharge feature to pull down the output voltage when the ON pin is driven low. There are three ways to configure the quick output discharge (QOD) pin as below:

1. Internal resistor mode: short QOD directly to VOUT, using the internal pull-down resistor (R_{QOD}) to discharge the output energy when switch is disabled. Discharge rate is controlled by the internal pull-down resistor (R_{QOD}).

2. External resistor mode: connect QOD to VOUT via an external resistor (R_{EXT}). Adjust R_{EXT} to fine-tune the discharge rate when switch is disabled. Total discharge resistance (R_{TOTAL}) is calculated as:

$$R_{TOTAL} = R_{QOD} + R_{EXT} \quad (1)$$

where:
R_{TOTAL} is total output discharge resistance.
R_{QOD} is internal pull-down resistance.
R_{EXT} is external resistance placed between the VOUT and QOD pins.

3. Disable QOD: leave QOD floating, the output remains floating when switch is disabled.

Adjustable Rise Time (SS)

A capacitor between SS and GND pins determines the slew rate of V_{OUT}. The rise time can be estimated using the below equation.

$$t_R = C_{SS} \times (0.8 \times V_{OUT})/I_{SS}/3.4 \quad (2)$$

where:
V_{OUT} is the output voltage (in V).
C_{SS} is the capacitance value on the SS pin (in pF).
I_{SS} is the soft-start internal current source (1.3μA).
t_R is the rise time (in μs).

This equation is based on the voltage transition from 10% to 90% on V_{OUT} and is not valid when C_{SS} is below 330pF. For cases where C_{SS} is below 330pF, please refer to Table 1 for the corresponding rise time values. Rise time can also be estimated by dividing the input voltage by the slew rate. The rise times for V_{BIAS} = 5V listed in Table 1 are derived from measurements taken on a typical device.

Table 1. Rise Time vs. C_{SS} Capacitor

C_{SS} (pF)	Rise Time (μs) 10% - 90% (1)				
	V_{IN} = 5V	V_{IN} = 3.3V	V_{IN} = 1.8V	V_{IN} = 1.2V	V_{IN} =0.8V
0	220.9	159.6	105.5	80.3	61.8
220	221	160.6	105.3	80.9	61.3
330	226.3	159	104.2	79.5	60.6
470	334.8	231.3	123.1	80.5	61.4
680	521.1	363.7	201.8	127.9	75.6
1000	754.4	538.6	305	204.2	127.8
2200	1675.4	1181.2	682.4	451.2	293.8
4700	3408	2421.6	1416	950.4	625

NOTE: 1. Typical values at T_J = +25℃, V_{BIAS} = 5V, C_L = 10μF, C_{IN} = 1μF, R_L = 100Ω, with a 25V X7R 10% ceramic capacitor on SS.

DETAILED DESCRIPTION (continued)

Power Good

There is an open-drain pin, and power good (PG) is set to high when the soft-start period is finished. When V_{BIAS} is lower than the UVLO threshold (1.4V TYP), or ON is lower than the falling threshold, the pin is set to low level.

Thermal Shutdown

Thermal shutdown protects the device from excessive temperature and can recovery automatically. When die temperature exceeds +170℃ (TYP), the MOSFET will be shut down and remained off until die temperature drops below +150℃ (TYP).

APPLICATION INFORMATION

Typical Application

This example illustrates how to choose C_{SS} in details to limit inrush current within the requirement.

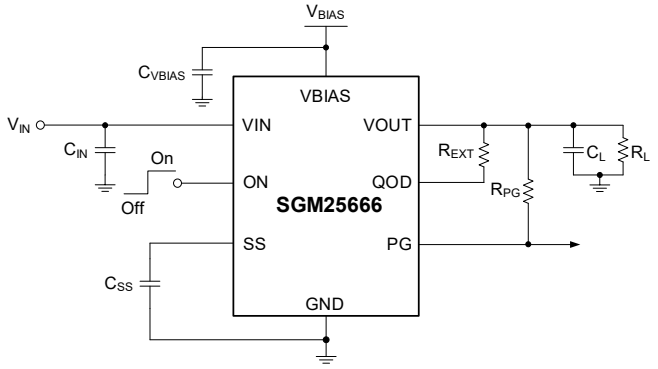


Figure 4. Typical Application Schematic

Design Requirements

Table 2 shows the SGM25666 design parameters.

Table 2. Design Parameters

Design Parameter	Value
V_{BIAS} Voltage (V_{BIAS})	5V
Input Voltage (V_{IN})	5V
Load Capacitance (C_L)	220μF
Maximum Acceptable Inrush Current (I_{INRUSH})	1.5A

Inrush Current and C_{SS} Selection

When the switch is enabled, the C_L must be charged from 0V to 5V (set value). This process causes the inrush current, and it can be calculated by Equation 3.

$$I_{INRUSH} = C_L \times dV_{OUT}/dt_{SS} \quad (3)$$

where:

C_L is the output capacitance.

dV_{OUT} is the rising change value of V_{OUT} after the device is enabled.

dt_{SS} is the soft-start time taken by the device to increase V_{OUT} after the device is enabled.

The V_{OUT} soft-start time can be programmed. This function is used to control the inrush current during turn-on. The design requirements and inrush current equation can be used to calculate the appropriate soft-start time. See Equation 4.

$$1.5A = 220\mu F \times 5V/tss \quad (4)$$

$$t_{SS} = 733.3\mu s \quad (5)$$

If t_{SS} is known, it can be calculated that $t_R = 0.8 \times t_{SS} \approx$ 586.7μs. In order to ensure that the inrush current is less than 1.5A, an appropriate C_{SS} capacitor should be selected to produce a rise time more than 586.7μs.

For safety margin, refer to Table 1, it is necessary to select 1000pF capacitor.

Input Capacitor (C_{IN})

Turning on the N-MOSFET to charge load capacitor will generate inrush current, which may cause the V_{IN} to drop. In order to prevent the drop, a capacitor must be placed between the VIN and GND pin. Usually, a 1μF input capacitor (C_{IN}) placed close to the pins is sufficient. However, higher capacitance values could further reduce the voltage drop. So, larger C_{IN} can be used to reduce the voltage drop in high current applications. It should be noted that if the input parasitic situation is poor, it is recommended to use a larger input capacitor.

Output Capacitor (C_L)

A 10μF output capacitor (C_L) should be placed between VOUT and GND close to the device pins. This capacitor will prevent parasitic board inductances from forcing VOUT below GND when the switch is turned off.

VBIAS Capacitor (C_{VBIAS})

It is recommended to place a 0.1μF capacitor (C_{VBIAS}) close to the VBIAS pin. This capacitor between VBIAS and GND is employed to stabilize the VBIAS supply voltage and mitigate the influence of low-frequency noise. Moreover, if the VBIAS supply environment has the poor parasitic situation, a larger capacitor is required.

APPLICATION INFORMATION (continued)

Layout Guidelines

Careful layout is always important to ensure good performance and stable operation to any kind of load switch.

- All high-current traces (VIN and VOUT) can be as short as possible to optimize parasitic parameters.
- Locate the input and output capacitors as close as possible to the device.
- Choose wide traces for VIN, VOUT and GND. It is recommended to use ground copper pour. Special attention should be paid to that size and number of via must be enough for a given current.

Thermal Considerations

Assuming a given ambient temperature and package thermal resistance, the maximum allowable power dissipation is calculated by:

$$P_{D(MAX)} = \frac{T_{J(MAX)} - T_A}{\theta_{JA}} \quad (6)$$

where:

$P_{D(MAX)}$ is the maximum power dissipation.

$T_{J(MAX)}$ is the maximum operating junction temperature.

T_A is the operating ambient temperature.

θ_{JA} is the package thermal resistance.

REVISION HISTORY

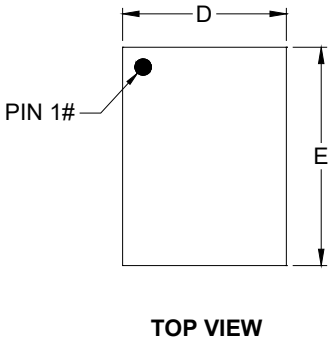
NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

MARCH 2026 – REV.A to REV.A.1	Page
Added VBIAS capacitor	1, 2, 13
Updated ON pin high voltage	2, 4, 5, 12

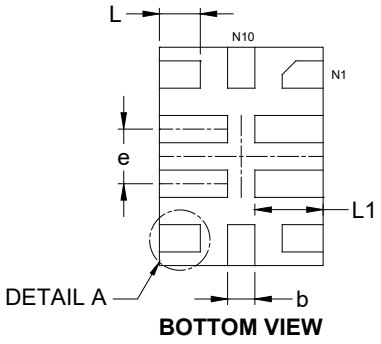
Changes from Original to REV.A (DECEMBER 2025)	Page
Changed from product preview to production data	All

PACKAGE OUTLINE DIMENSIONS

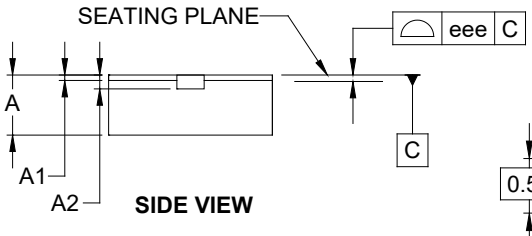
UTQFN-1.5×2-10L



TOP VIEW

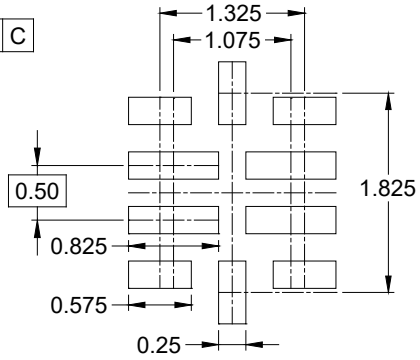


BOTTOM VIEW



SIDE VIEW

DETAIL A
ALTERNATE TERMINAL CONSTRUCTION



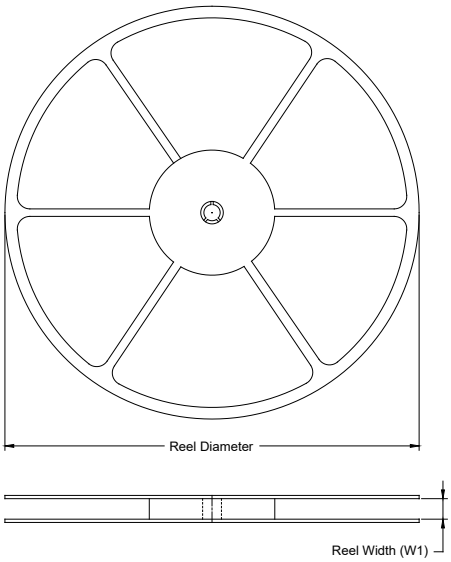
RECOMMENDED LAND PATTERN (Unit: mm)

Symbol	Dimensions In Millimeters		
	MIN	NOM	MAX
A	0.500	-	0.600
A1	0.000	-	0.050
A2	0.127 REF		
b	0.200	-	0.300
D	1.400	-	1.600
E	1.900	-	2.100
e	0.500 BSC		
L	0.275	-	0.475
L1	0.525	-	0.725
eee	0.080		

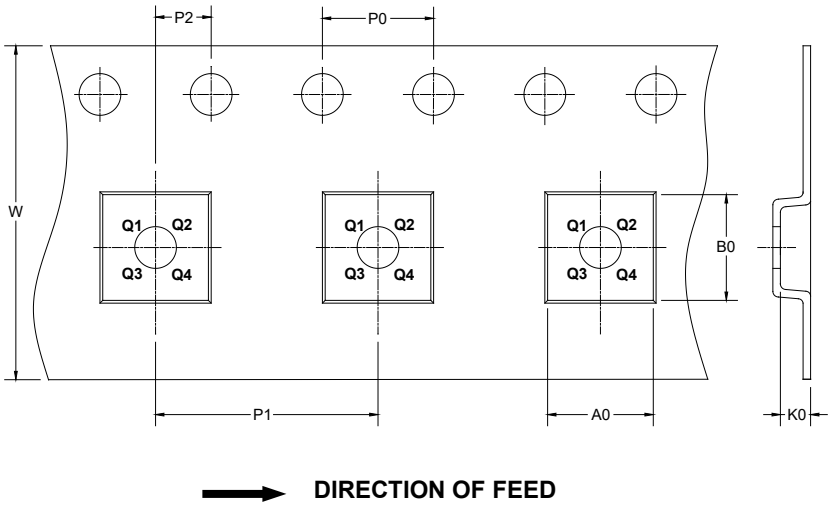
NOTE: This drawing is subject to change without notice.

TAPE AND REEL INFORMATION

REEL DIMENSIONS



TAPE DIMENSIONS



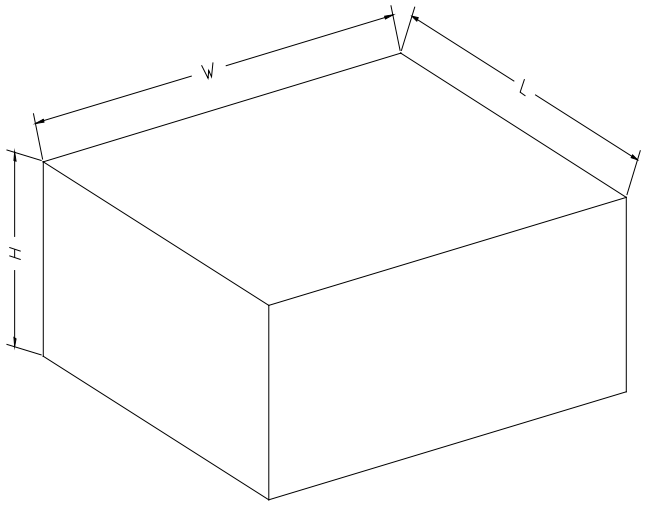
NOTE: The picture is only for reference. Please make the object as the standard.

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
UTQFN-1.5×2-10L	7"	9.5	1.75	2.30	0.75	4.0	4.0	2.0	8.0	Q1

DD0001

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