

DESCRIPTION

The GLF1531Q is an ultra-efficiency integrated N-channel power protection switch, with a wide input range from 0.8 V to 5.5 V.

The GLF1531Q provides the programmable output voltage (V_{OUT}) rise time by an external capacitor on the SR pin. It limits the inrush current at start up condition and helps to minimize the voltage drop. The integrated output discharge FET discharges output voltage quickly when the device is disabled.

The GLF1531Q offers the best-in-class on the size, on-resistance (R_{ON}) performance, and the wide operating temp range up to 125 °C.

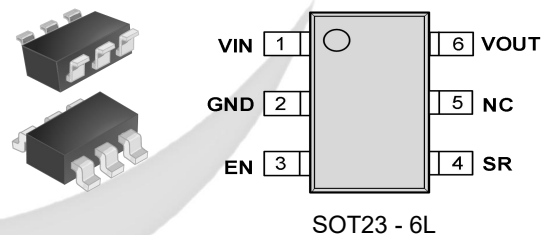
FEATURES

- AEC-Q100 Qualified
- Qualified for Automotive Applications:
 - Temperature Grade 1: -40 °C to 125 °C Ambient Operating Temperature Range
- Supply Voltage Range: 0.8 V to 5.5 V
6 V_{ABS} max
- Continuous Output Current: 2 A
- Low R_{ON} : 44 m Ω at 25 °C Typ. at 5 V_{IN}
- Low Quiescent Current I_Q :
 - 14 μ A Typ. at 5 V_{IN}
 - 7 μ A Typ. at 3.3 V_{IN}
- Low Shutdown Current I_{SD} :
 - 13 nA Typ. at 5 V_{IN}
 - 10 nA Typ. at 3.3 V_{IN}
- Programmable V_{OUT} Rising Time, SR Pin
- Quick Output Discharge
- ESD Performance Tested per AEC-Q100
- Moisture Sensitivity Level: MSL-3 and 260 °C Peak Reflow Temp
- Lead-free, Halogen-free and Adhere to RoHS Directive

APPLICATIONS

- Automotive Electronics
- Infotainment and Cluster
- Automotive Gateway
- ADSA (Advanced Driver Assistance System)

PACKAGE

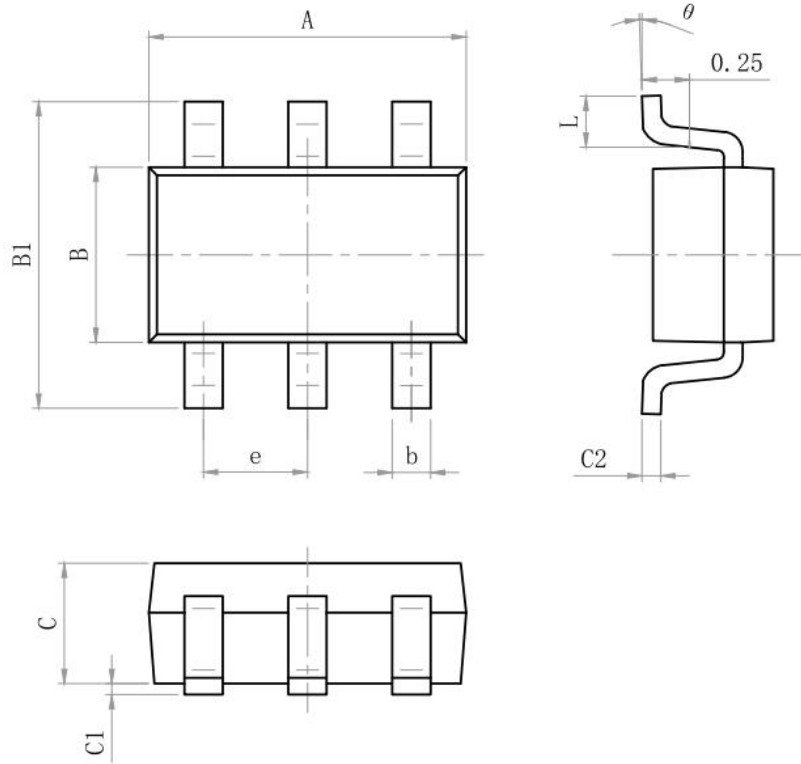


DEVICE ORDERING INFORMATION

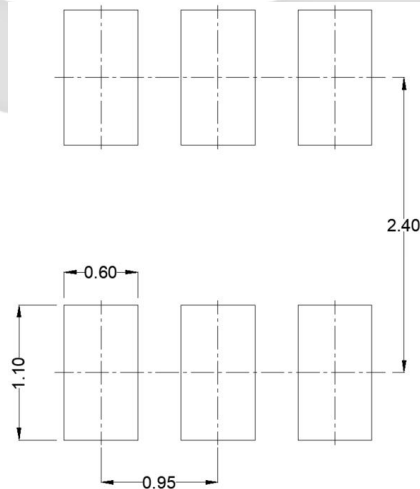
| Part Number | Top Mark | R_{ON} (Typ) at 5.5 V_{IN} | V_{OUT} Rise Time | EN Activity | Package |
|---------------|----------|--------------------------------|---------------------|-------------|------------|
| GLF1531Q-T2G7 | HQ | 44 m Ω | Programmable | High | SOT23 - 6L |

PACKAGE OUTLINE

| Size Mark | Min (mm) | Max (mm) | Size Mark | Min (mm) | Max (mm) |
|-----------|------------|----------|-----------|----------|----------|
| A | 2.82 | 3.02 | C | 1.05 | 1.15 |
| e | 0.95 (BSC) | | C1 | 0.03 | 0.15 |
| b | 0.28 | 0.45 | C2 | 0.12 | 0.23 |
| B | 1.50 | 1.70 | L | 0.35 | 0.55 |
| B1 | 2.60 | 3.00 | θ | 0° | 8° |

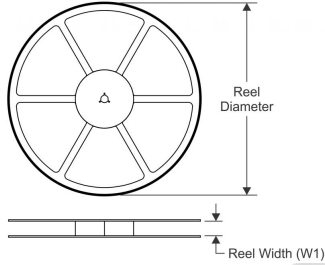


Recommended Footprint

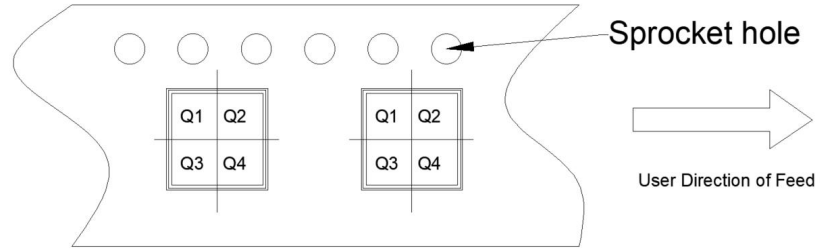


TAPE AND REEL INFORMATION

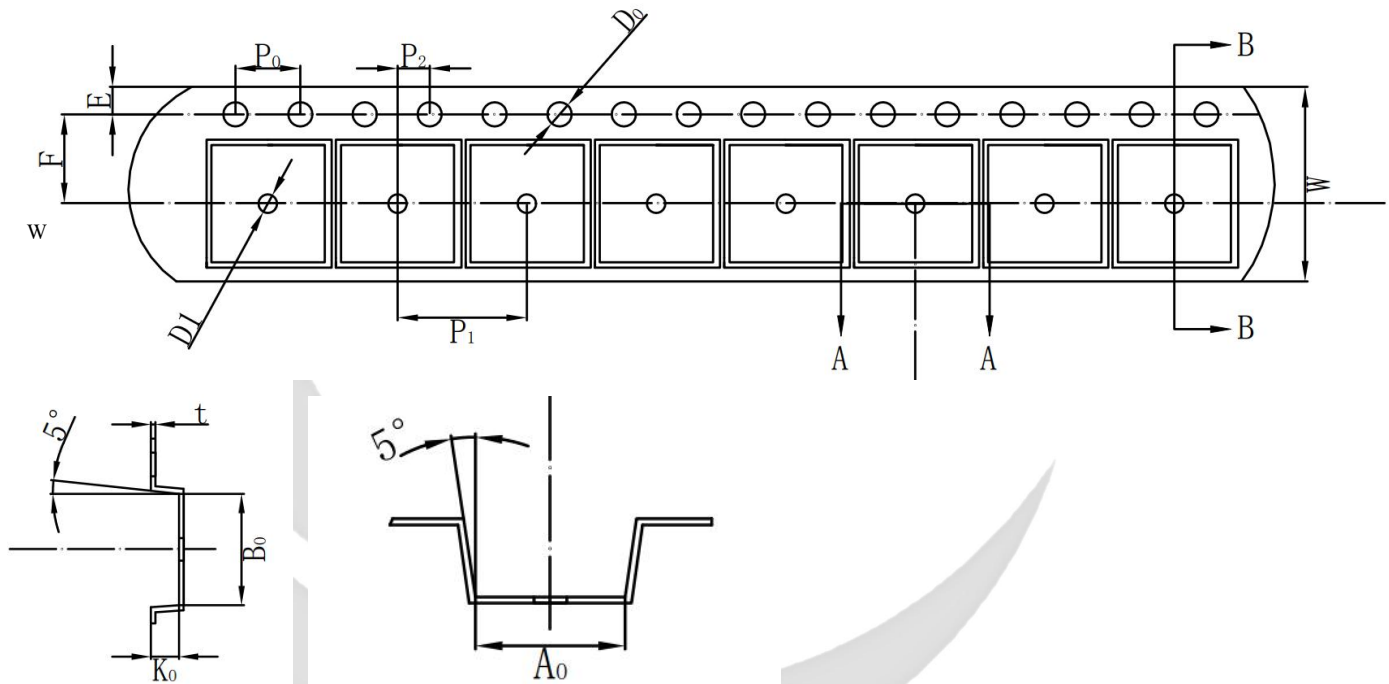
REEL DIMENSIONS



QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



TAPE DIMENSIONS



| Device | Package | Pins | SPQ | Reel Diameter (mm) | Reel Width W1 | A0 | B0 | K0 | P1 | W | Pin1 |
|---------------|---------|------|------|--------------------|---------------|------|------|------|----|---|------|
| GLF1531Q-T2G7 | SOT23-6 | 6 | 3000 | 178 | 9 | 3.25 | 3.30 | 1.38 | 4 | 8 | Q3 |

Remark:

A0: Dimension designed to accommodate the component width

B0: Dimension designed to accommodate the component length

C0: Dimension designed to accommodate the component thickness

W: Overall width of the carrier tape

P1: Pitch between successive cavity centers