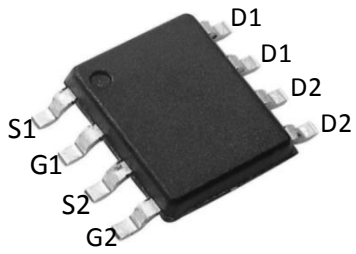
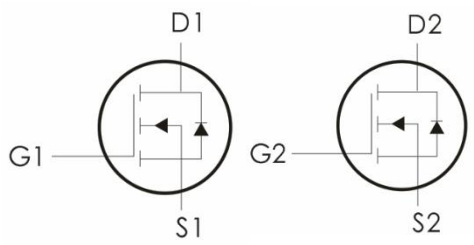
## Description：

This Dual N-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.




## Features：

1) $V_{DS}$=20V,$I_D$=8A,$R_{DS(ON)}$<21mΩ @$V_{GS}$=4.5V（Typ：14mΩ）
2) Low gate charge.
3) Green device available.
4) Advanced high cell denity trench technology for ultra low $R_{DS(ON)}$.
5) Excellent package for good heat dissipation.
6) MSL3

## Package Marking and Ordering Information：

| Part NO. | Marking | Package | Packing |
|---|---|---|---|
| DOS9926C | S9926C | SOP-8D | 3000 pcs/Reel |

## Absolute Maximum Ratings： ($T_A$=25℃ unless otherwise noted)

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{DS}$ | Drain-Source Voltage | 20 | V |
| $V_{GS}$ | Gate-Source Voltage | ±12 | V |
| $I_D$ | Continuous Drain Current-$T_A$=25℃ [1] | 8 | A |
| | Continuous Drain Current-$T_A$=100℃ [1] | 5.6 | |
| $I_{DM}$ | Pulsed Drain Current [2] | 32 | |
| $P_D$ | Power Dissipation-$T_A$=25℃ | 2.5 | W |
| $E_{AS}$ | Single pulse avalanche energy [3] | 14 | mJ |
| $T_J$, $T_{STG}$ | Operating and Storage Junction Temperature Range | -55-+150 | ℃ |

## Thermal Characteristics：

| Symbol | Parameter | Max | Units |
|---|---|---|---|
| $R_{\theta JA}$ | Thermal Resistance,Junction to Ambient | 50 | ℃/W |

## Electrical Characteristics: ($T_A$=25℃ unless otherwise noted)

| Symbol | Parameter | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| **Off Characteristics** | | | | | | |
| $BV_{DSS}$ | Drain-Sourtce Breakdown Voltage | $V_{GS}$=0V,$I_D$=250μA | 20 | --- | --- | V |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{GS}$=0V, $V_{DS}$=20V | --- | --- | 1 | μA |
| $I_{GSS}$ | Gate-Source Leakage Current | $V_{GS}$=±12V, $V_{DS}$=0A | --- | --- | ±100 | nA |
| **On Characteristics** | | | | | | |
| $V_{GS(th)}$ | Gate-Source Threshold Voltage | $V_{GS}$=$V_{DS}$, $I_D$=250μA | 0.5 | 0.7 | 1 | V |
| $R_{DS(ON)}$ | Drain-Source On Resistance[4] | $V_{GS}$=4.5V,$I_D$=5A | --- | 14 | 21 | mΩ |
| | | $V_{GS}$=2.5V,$I_D$=5A | --- | 21 | 25 | |
| **Dynamic Characteristics** | | | | | | |
| $C_{iss}$ | Input Capacitance | $V_{DS}$=10V, $V_{GS}$=0V, f=1MHz | --- | 550 | --- | pF |
| $C_{oss}$ | Output Capacitance | | --- | 98 | -- | |
| $C_{rss}$ | Reverse Transfer Capacitance | | --- | 87 | --- | |
| **Switching Characteristics** | | | | | | |
| $t_{d(on)}$ | Turn-On Delay Time | $V_{DS}$=10V, $I_D$=3A, $R_{ENG}$=3Ω ,$V_{GS}$=4.5V | --- | 4 | --- | ns |
| $t_r$ | Rise Time | | --- | 18 | --- | ns |
| $t_{d(off)}$ | Turn-Off Delay Time | | --- | 111 | --- | ns |
| $t_f$ | Fall Time | | --- | 67 | --- | ns |
| $Q_g$ | Total Gate Charge | $V_{GS}$=4.5V, $V_{DS}$=10V, $I_D$=3A | --- | 9 | --- | nC |
| $Q_{gs}$ | Gate-Source Charge | | --- | 1.5 | --- | nC |
| $Q_{gd}$ | Gate-Drain “Miller” Charge | | --- | 2 | --- | nC |
| **Drain-Source Diode Characteristics** | | | | | | |
| $V_{SD}$ | Diode Forward Voltage | $V_{GS}$=0V, $I_{SD}$=6A | --- | --- | 1.2 | V |
| $I_S$ | Continuous Drain Curren | $V_D$=$V_G$=0V | --- | --- | 6.6 | A |
| $I_{SM}$ | Pulsed Drain Current | | --- | --- | 26.6 | A |
| Trr | Reverse Recovery Time | $I_F$=3A,$T_J$=25℃ dI/dt=100A/us | --- | 30 | --- | ns |
| Qrr | Reverse Recovery Charge | | --- | 7 | --- | nC |

**Notes:**

1. Computed continuous current assumes the condition of $T_{j,Max}$ while the actual continuous current depends on the thermal & electro-mechanical application board design
2. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
3. EAS condition : TJ=25℃,VDD=10V,$V_G$=4.5V,L=0.5mH
4. Pulse Test: Pulse Width≤300μs, Duty Cycle≤0.5%

## Typical Characteristics: ($T_A$=25℃ unless otherwise noted)

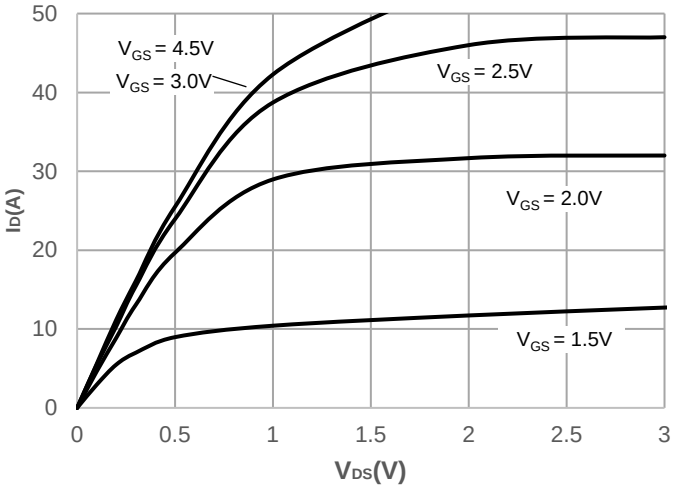



Figure 1: Output Characteristics

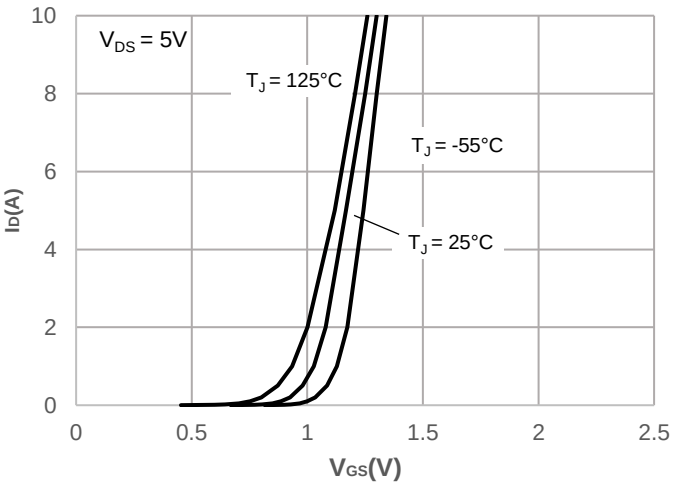



Figure 2: Typical Transfer Characteristics

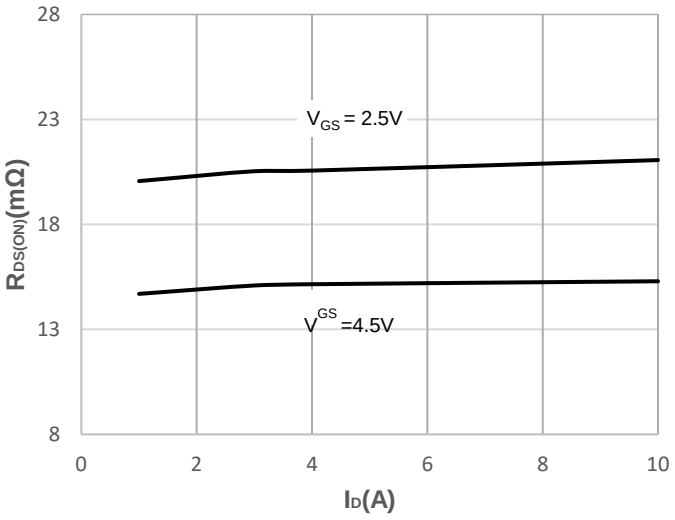



Figure 3: On-resistance vs. Drain Current

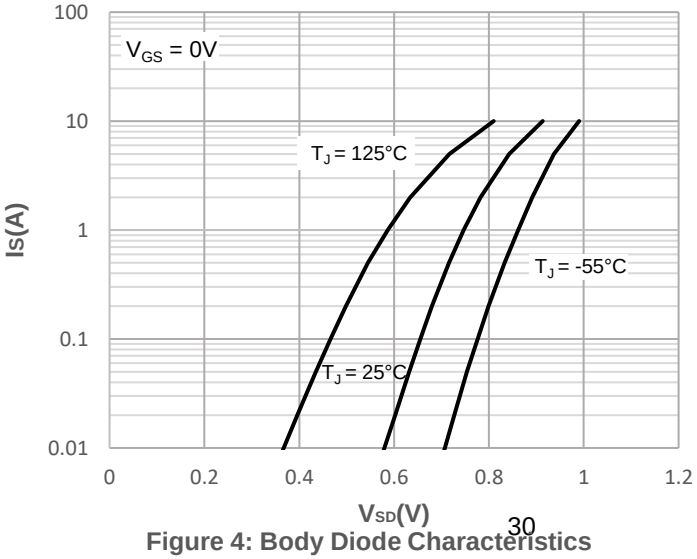



Figure 4: Body Diode Characteristics

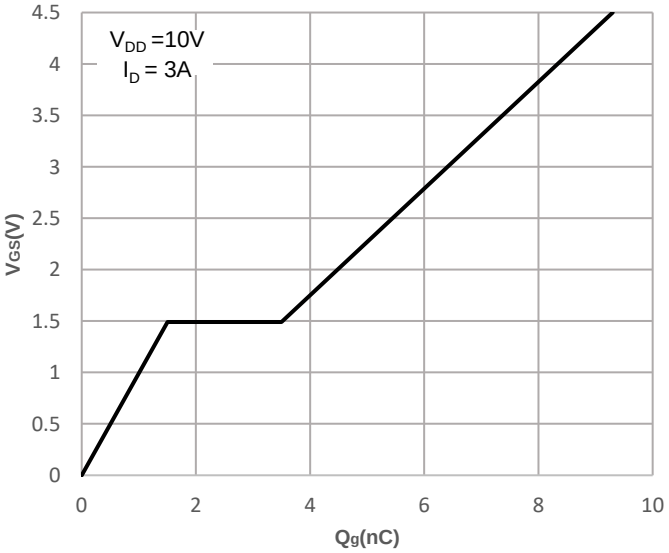



Figure 5: Gate Charge Characteristics

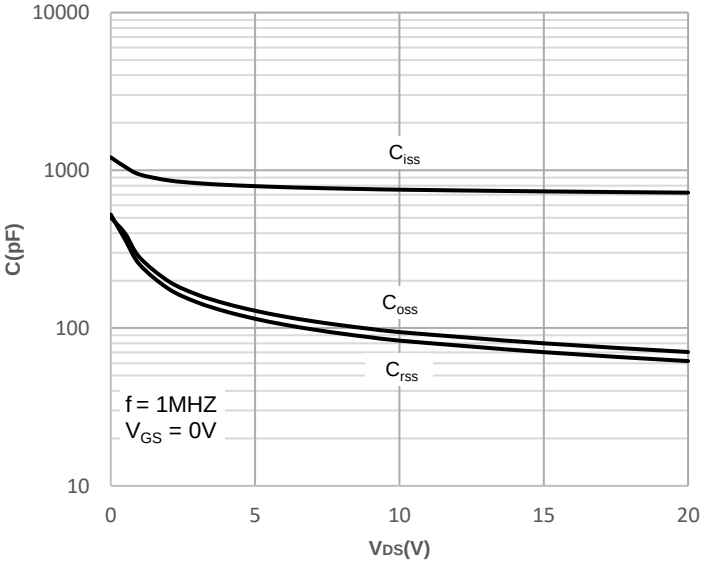



Figure 6: Capacitance Characteristics

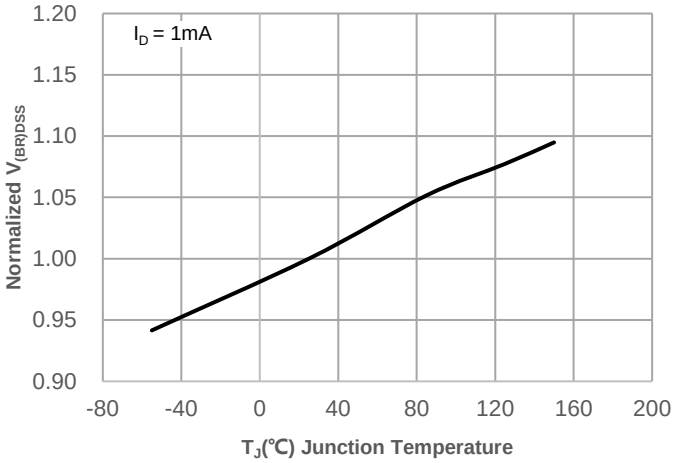



Figure 7: Normalized Breakdown voltage vs. Junction Temperature

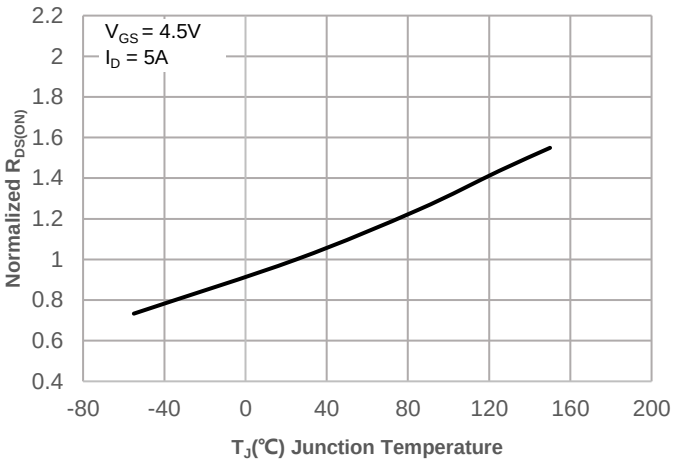



Figure 8: Normalized on Resistance vs. Junction Temperature

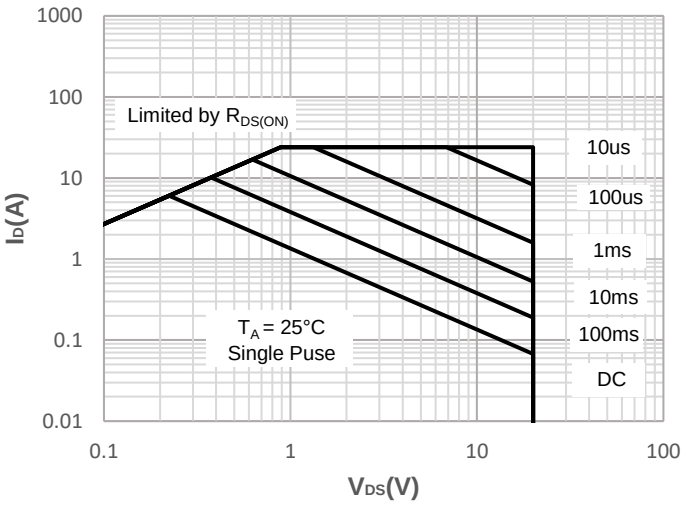



Figure 9: Maximum Safe Operating Area

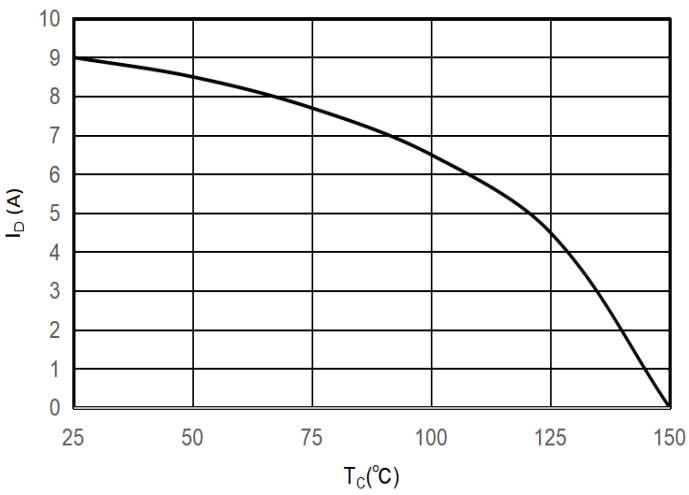



Figure 10: Maximum Continuous Drian Current vs. Ambient Temperature

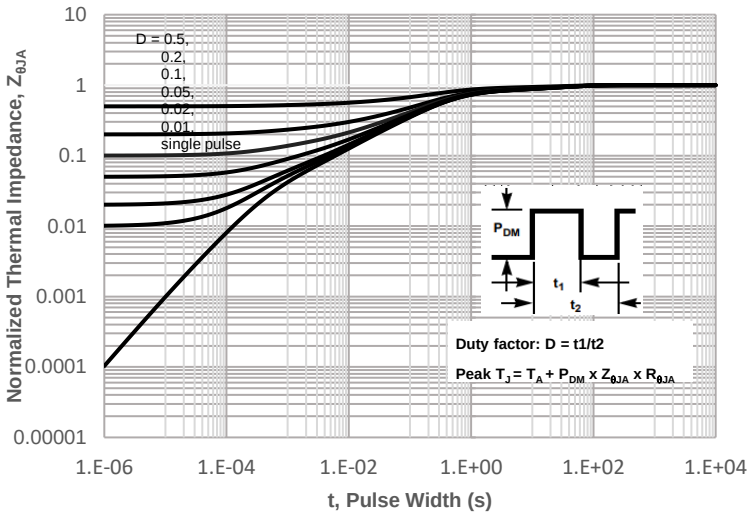



Figure 11: Normalized Maximum Transient Thermal Impedance

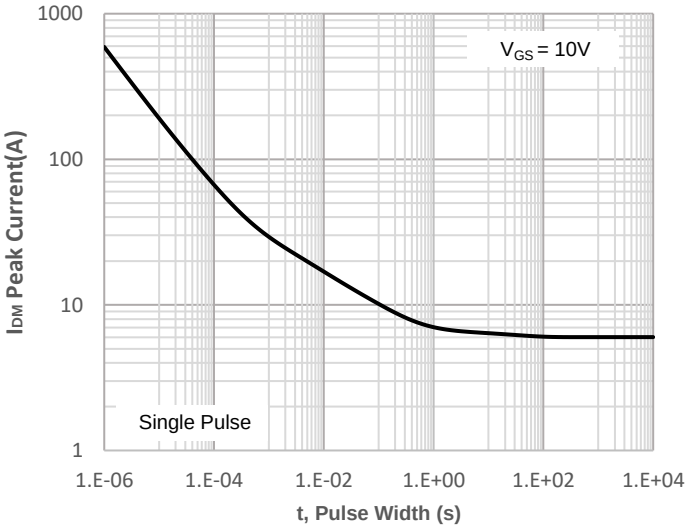
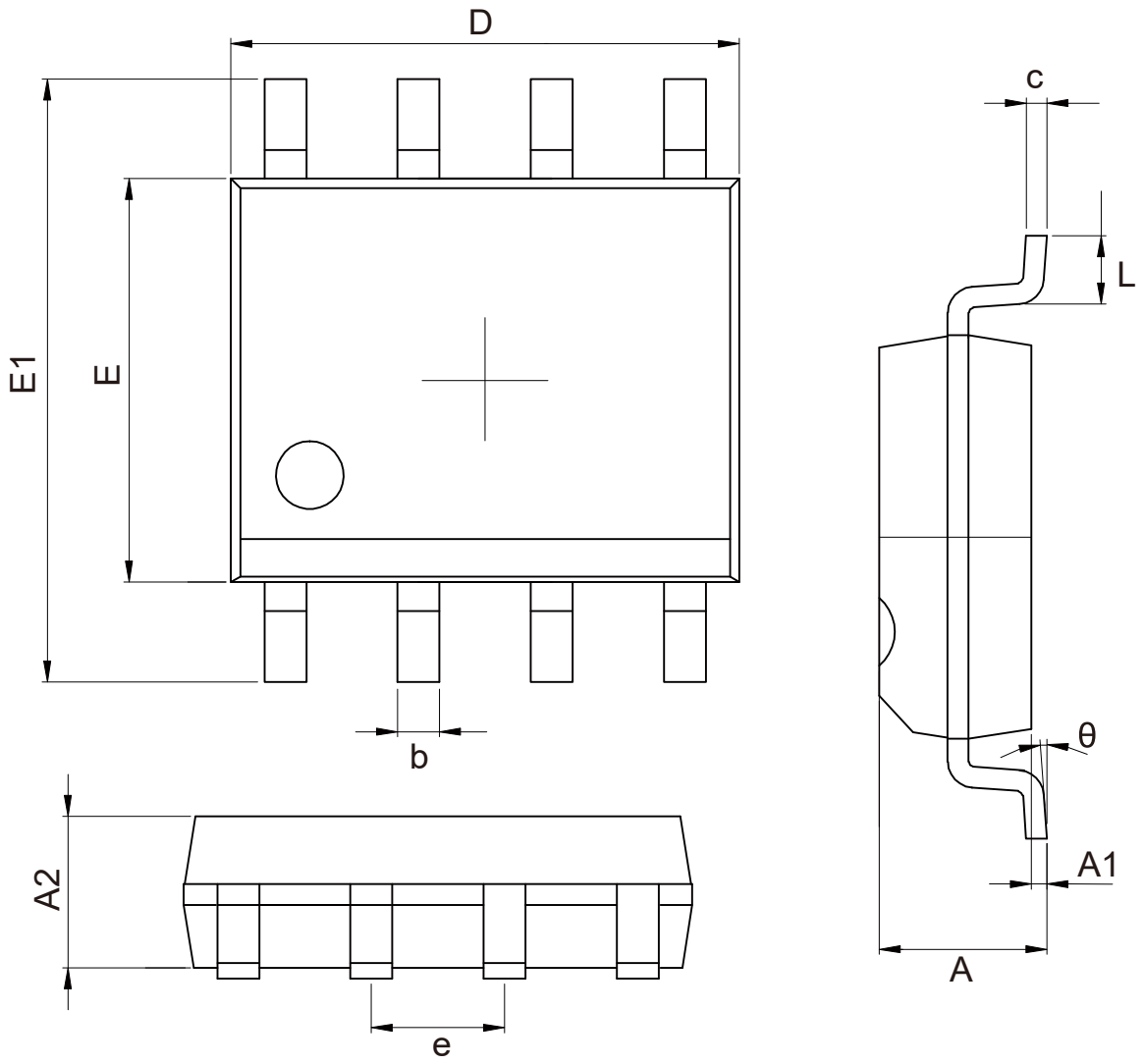





Figure 12: Peak Current Capacity

SOP-8D Package Information：

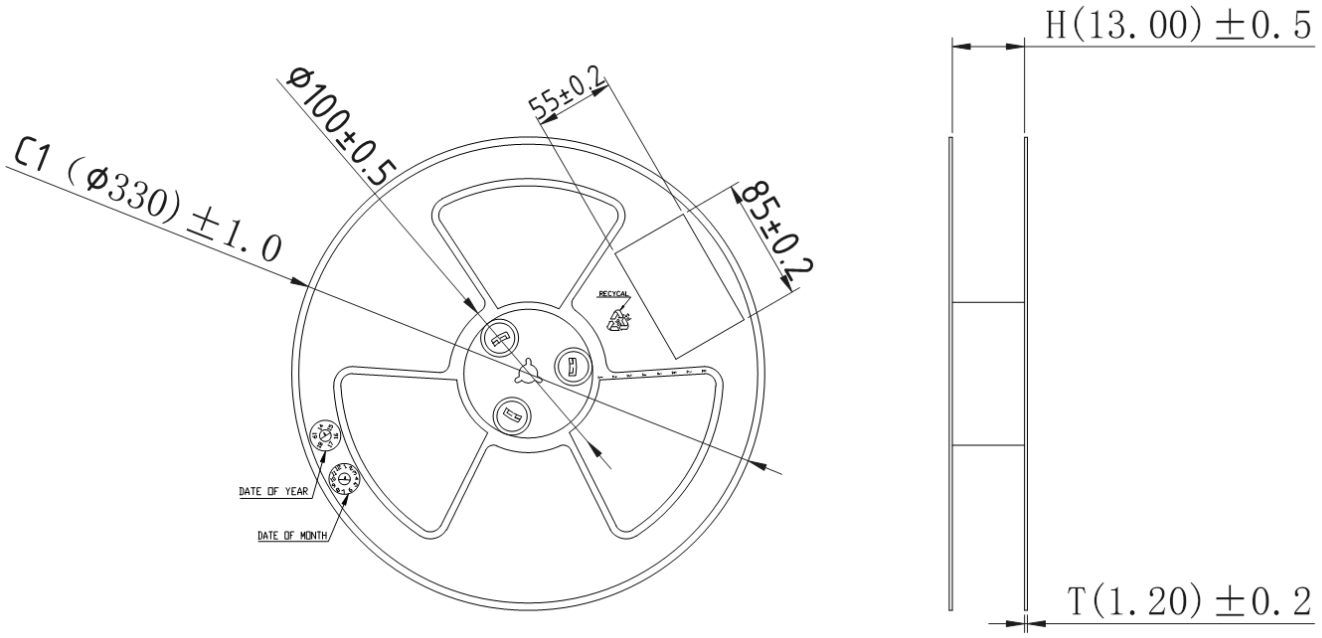


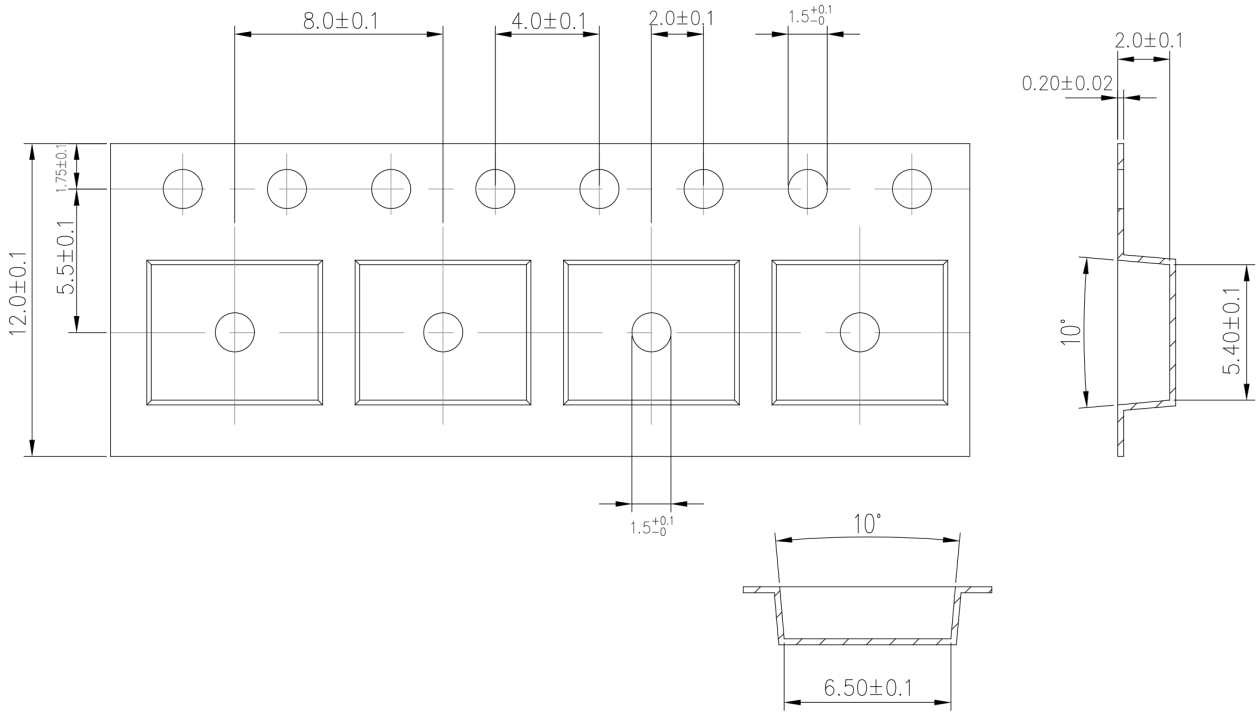

| COMMON DIMENSIONS<br>CUNITS MEASURE=MILLIMETER | | | |
|---|---|---|---|
| SYMBOL | MIN | NOM | MAX |
| A | 1.350 | —— | 1.750 |
| A1 | 0.100 | —— | 0.250 |
| A2 | 1.350 | —— | 1.550 |
| b | 0.330 | —— | 0.510 |
| c | 0.170 | —— | 0.250 |
| D | 4.700 | —— | 5.100 |
| E | 3.800 | 3.900 | 4.000 |
| E1 | 5.800 | —— | 6.200 |
| e | 1.270BSC | | |
| L | 0.400 | —— | 1.270 |
| θ | 0° | -- | 8° |

Unit:mm

# Tape & Reel Information

Dimensions in mm




Pulling direction →

## Marking Information：

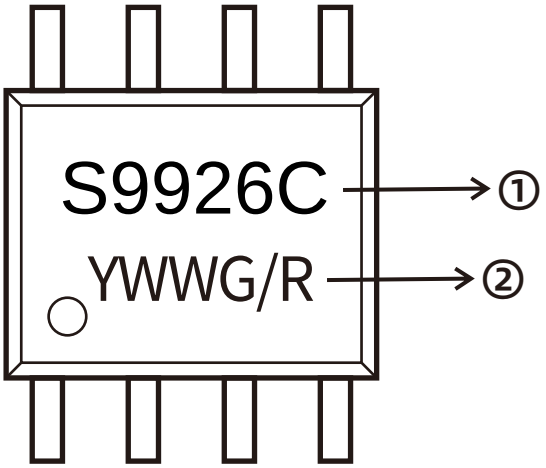
①. Part NO.

②. Date Code(YWWG / R)

Y：Year Code，last digit of the year

WW：Week Code(01-53)

G/R：G(Green) /R(Lead Free)




## Previous Version

| Version | Date | Subjects (major changes since last revision) |
|---|---|---|
| 1.2 | 2026-04-16 | Release of final version |

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