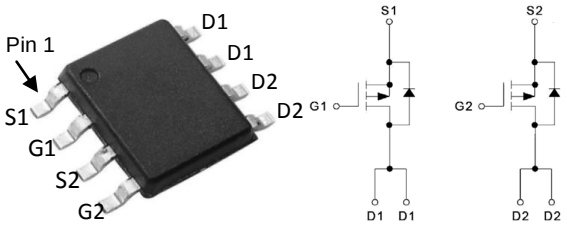
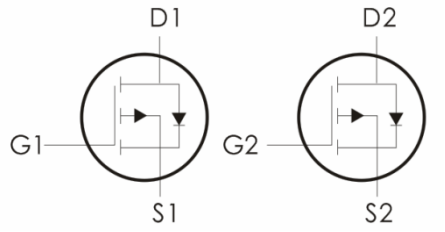
Description：

This Dual P-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}=-30V,I_D=-5A,$R_{DS(ON)}$<43mΩ @V_{GS}=-10V（Typ：35mΩ）
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
DO4801A	4801A	SOP-8	3000 pcs/Reel

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

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current [1]	-5	A
	Continuous Drain Current-T_A=100℃ [1]	-3.5	
I_{DM}	Pulsed Drain Current [2]	-20	
P_D	Power Dissipation	2.5	W
E_{AS}	Single pulse avalanche energy [3]	3	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	-30	---	---	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{GS}=0V, V_{DS}=-30V	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	V_{GS}=±20V, V_{DS}=0A	---	---	±100	nA
On Characteristics						
$V_{GS(th)}$	Gate-Source Threshold Voltage	V_{GS}=V_{DS}, I_D=250μA	-1	-1.5	-3	V
$R_{DS(ON)}$	Drain-Source On Resistance[4]	V_{GS}=-10V,I_D=-5.1A	---	35	43	mΩ
		V_{GS}=-4.5V,I_D=-4.2A	---	44	57	mΩ
		V_{GS}=-2.5V,I_D=-3.3A	---	60	78	mΩ
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=-15V, V_{GS}=0V, f=1MHz	---	450	---	pF
C_{oss}	Output Capacitance		---	130	--	
C_{rss}	Reverse Transfer Capacitance		---	70	---	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{DS}=-15V, I_D=-1A, R_G=6Ω ,V_{GS}=-10V	---	7	---	ns
t_r	Rise Time		---	13	---	ns
$t_{d(off)}$	Turn-Off Delay Time		---	14	---	ns
t_f	Fall Time		---	9	---	ns
Q_g	Total Gate Charge	V_{GS}=-10V, V_{DS}=-15V, I_D=-5.1A	---	8.5	---	nC
Q_{gs}	Gate-Source Charge		---	2.2	---	nC
Q_{gd}	Gate-Drain “Miller” Charge		---	3	---	nC
Drain-Source Diode Characteristics						
V_{SD}	Diode Forward Voltage	V_{GS}=0V, I_{SD}=-5.1A	---	---	-1.2	V
I_S	Continuous Drain Curren	V_D=V_G=0V	---	---	-5	A
I_{SM}	Pulsed Drain Current		---	---	-20	A

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=-15V,V_G=-10V,L=0.5mH
4. Pulse Test: Pulse Width≤300μs, Duty Cycle≤0.5%

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

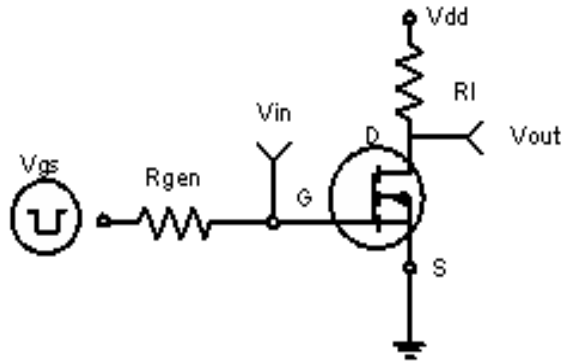


Figure 1:Switching Test Circuit

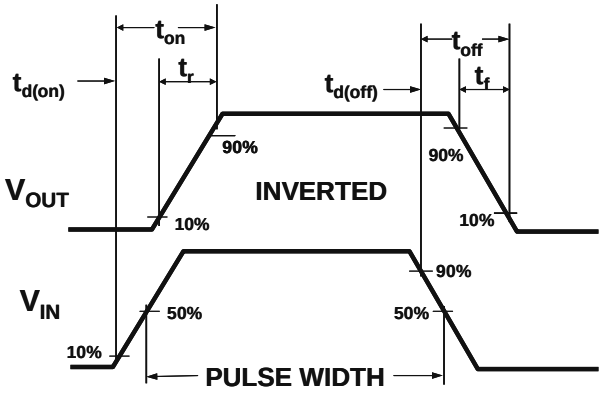


Figure 2:Switching Waveforms

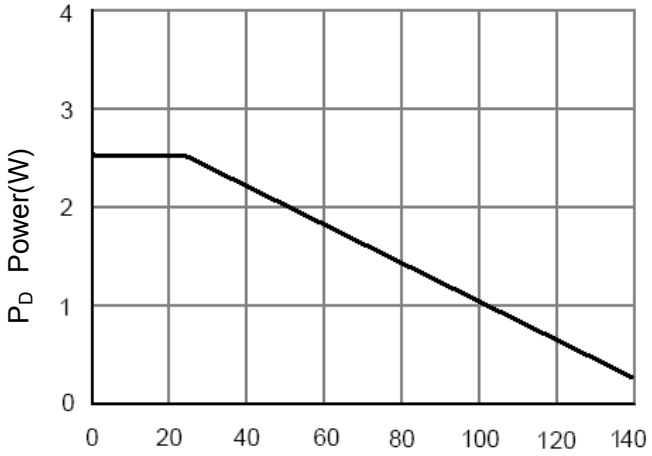


Figure 3 Power Dissipation

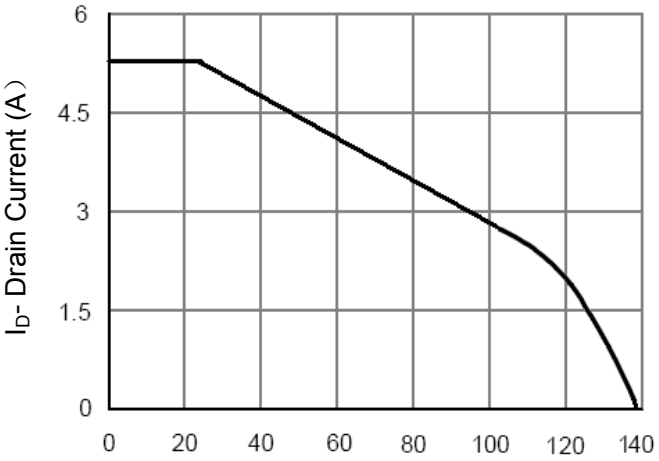


Figure 4 Drain Current

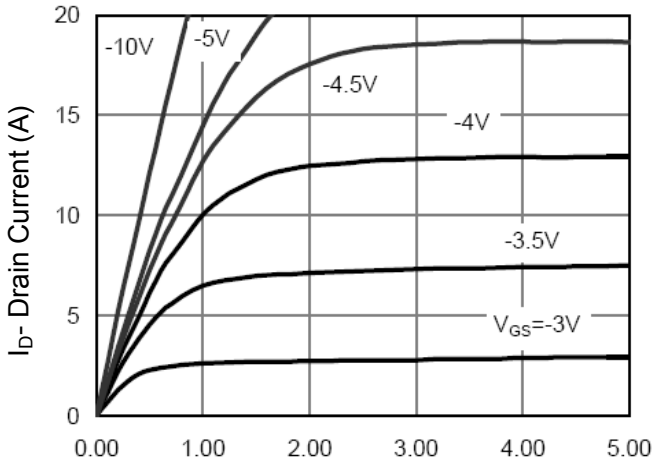


Figure 5 Output Characteristics

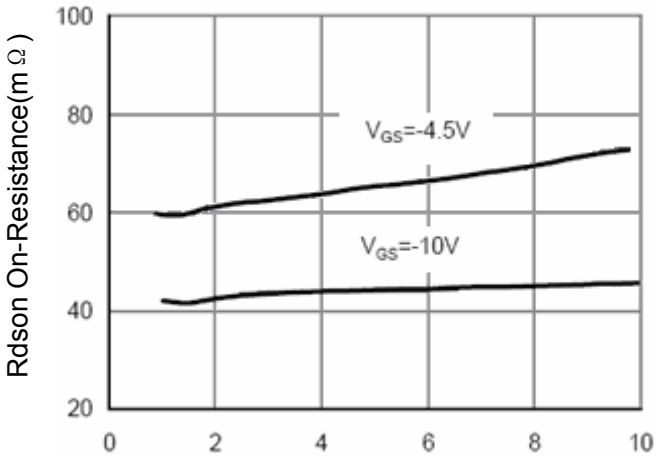


Figure 6 Drain-Source On-Resistance

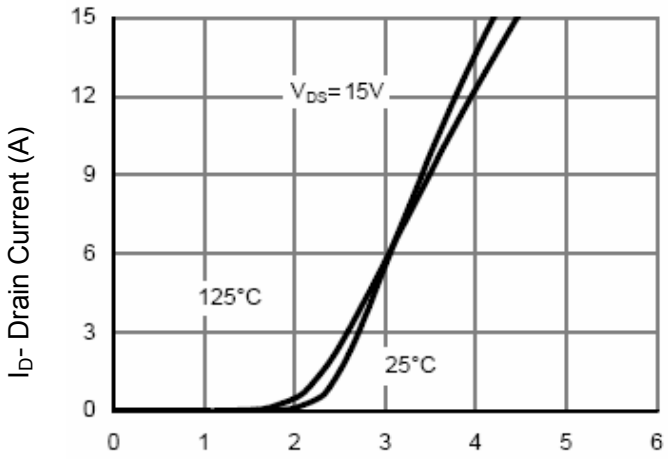


Figure 7 Transfer Characteristics

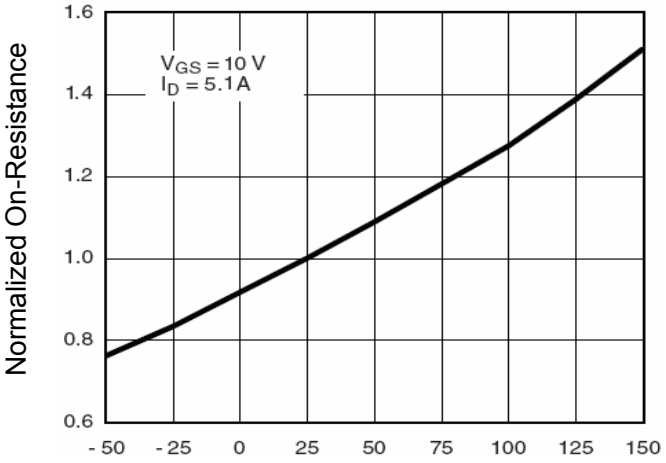


Figure 8 Drain-Source On-Resistance

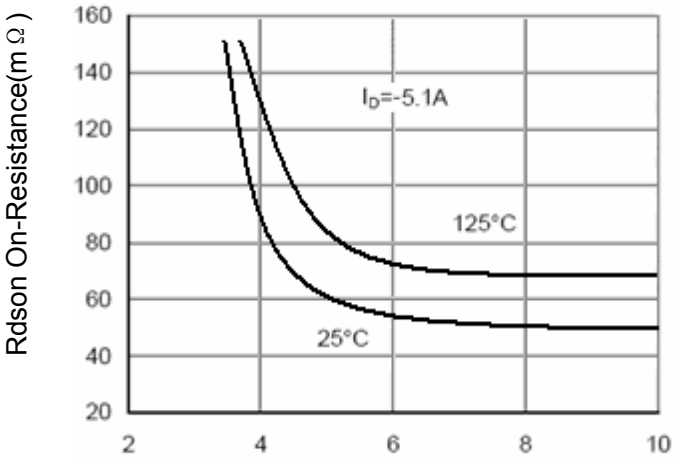


Figure 9 Rdson vs Vgs

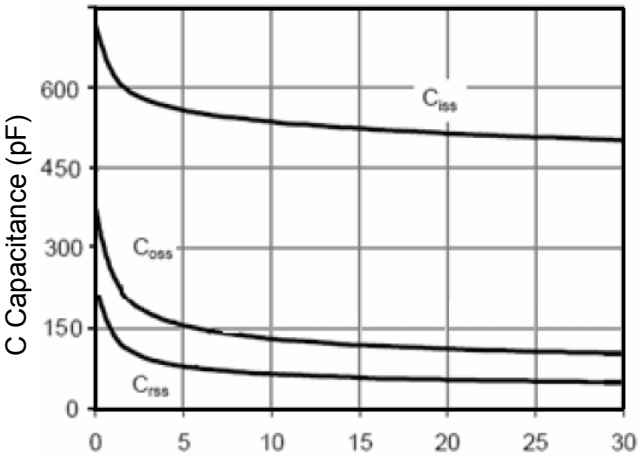


Figure 10 Capacitance vs Vds

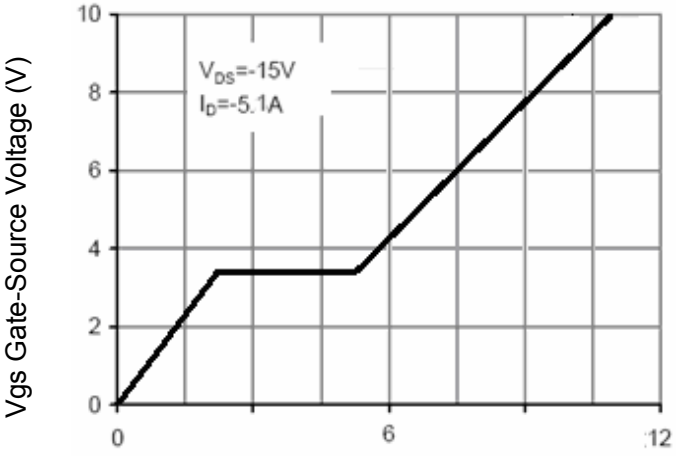


Figure 11 Gate Charge

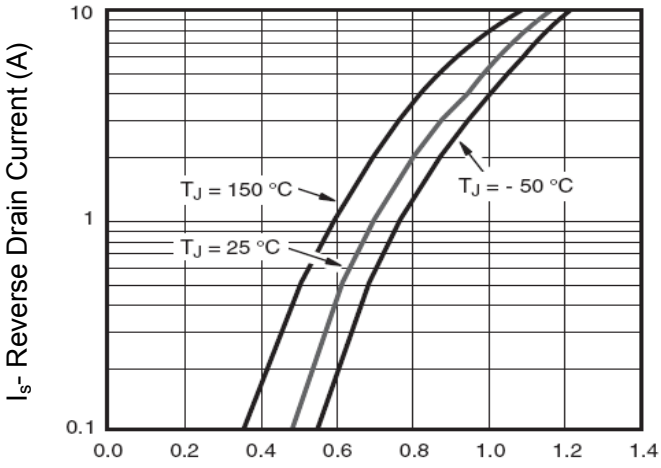


Figure 12 Source- Drain Diode Forward

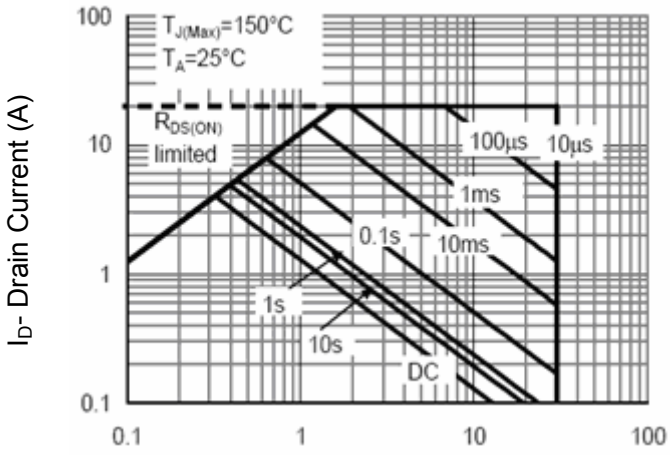


Figure 13 Safe Operation Area

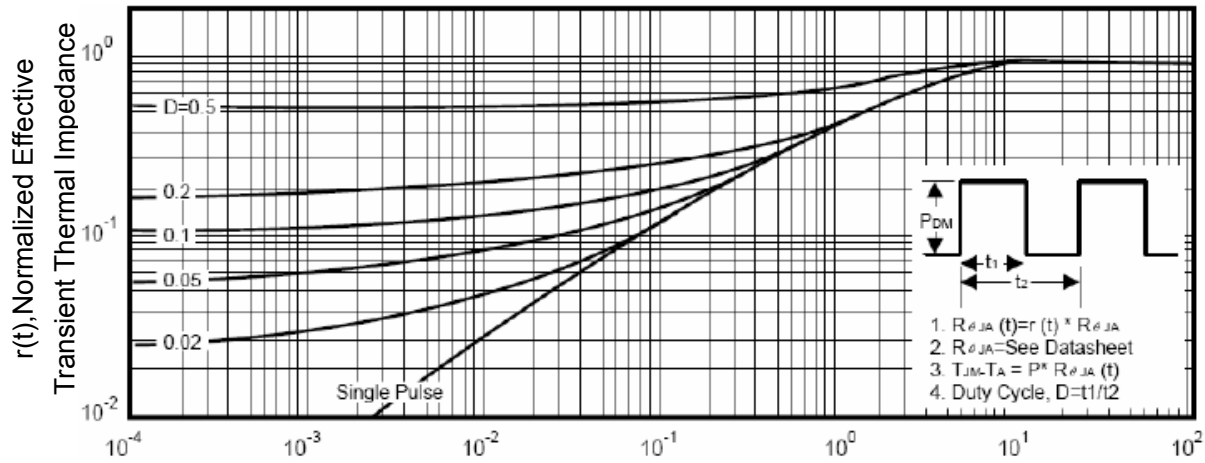
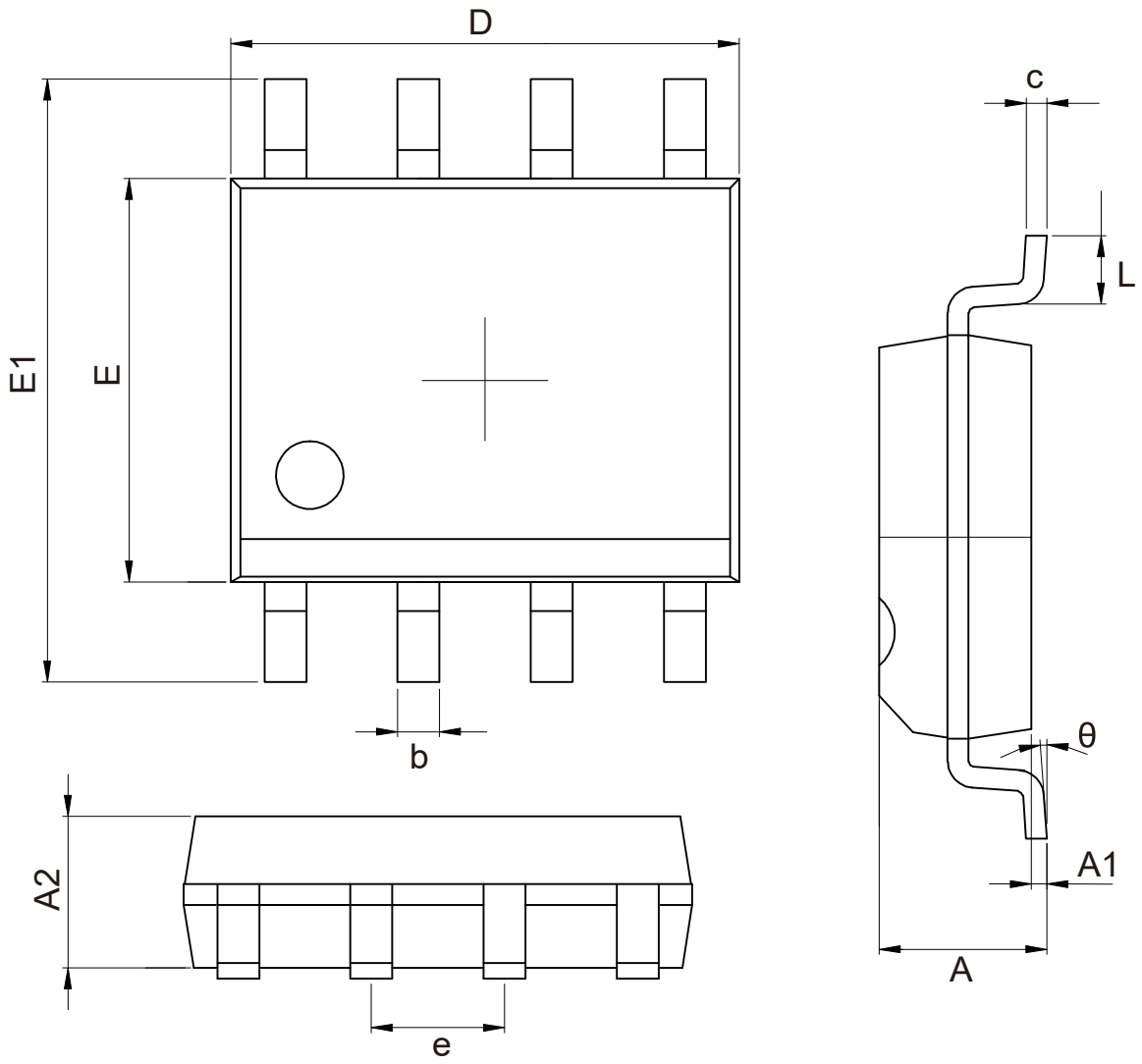


Figure 14 Normalized Maximum Transient Thermal Impedance

SOP-8D Package Information：

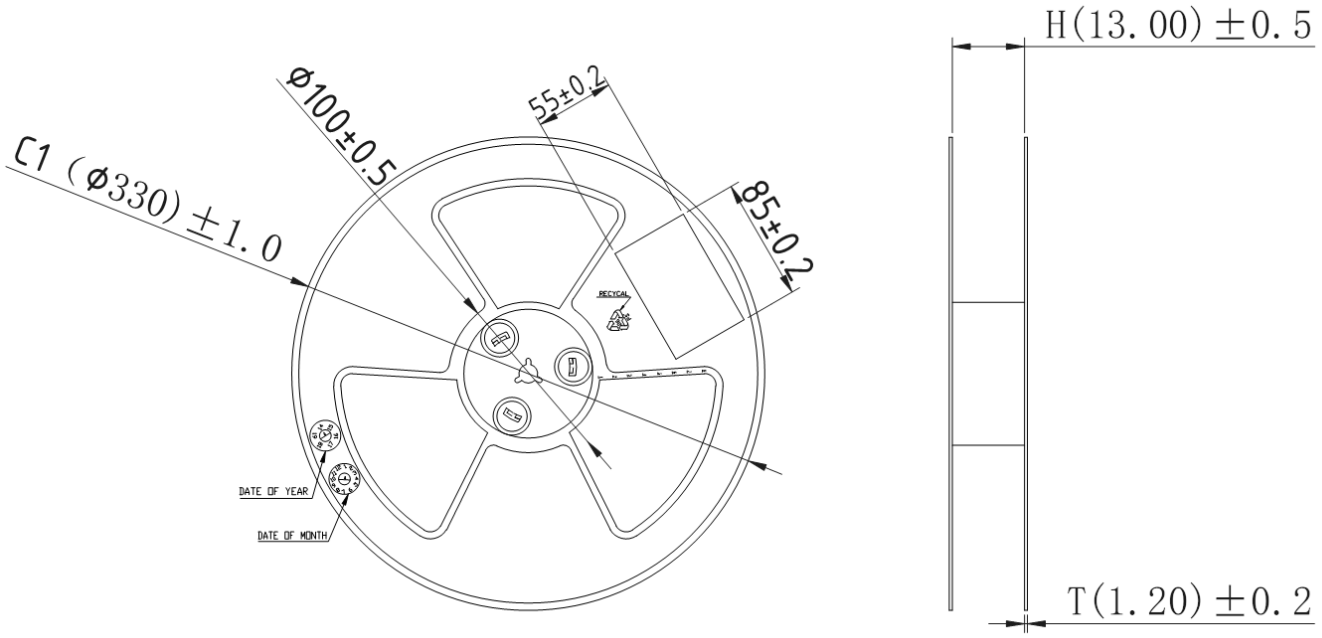


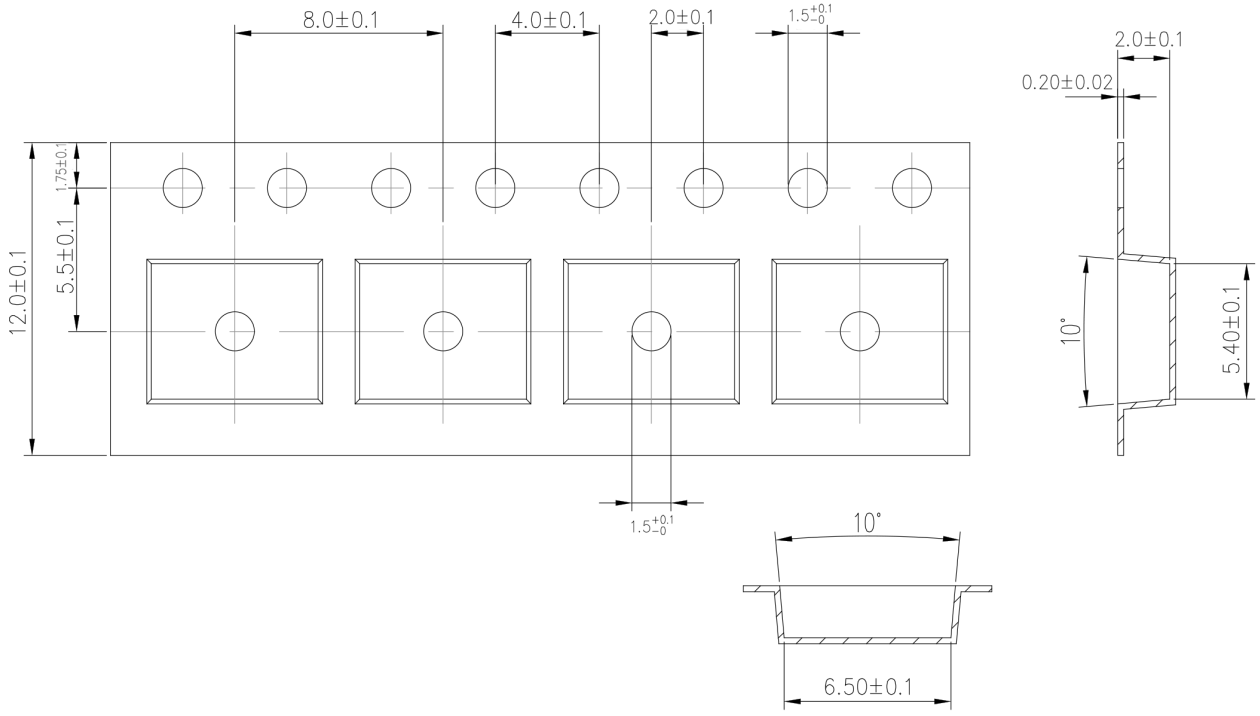
COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER			
SYMBOL	MIN	NOM	MAX
A	1.350	——	1.750
A1	0.100	——	0.250
A2	1.350	——	1.550
b	0.330	——	0.510
c	0.170	——	0.250
D	4.700	——	5.100
E	3.800	3.900	4.000
E1	5.800	——	6.200
e	1.270BSC		
L	0.400	——	1.270
θ	0°	--	8°

Unit:mm

Tape & Reel Information

Dimensions in mm





Pulling direction →

Marking Information：

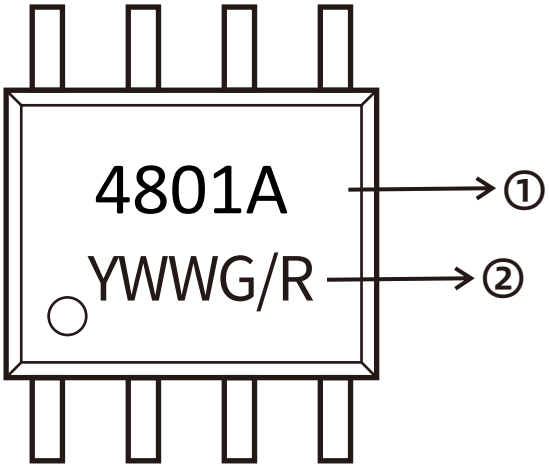
①. Part NO.

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)
1.0	2025-03-21	Release of final version

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