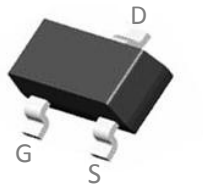
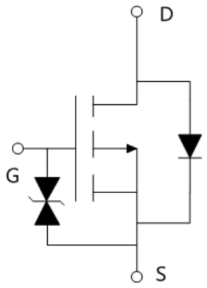
Description：

This 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,$R_{DS(ON)}$<35mΩ @V_{GS}=-10V（Typ：25mΩ）
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) ESD Protection
7) MSL3

Package Marking and Ordering Information：

Part NO.	Marking	Package	Packing
DO3035AeA	UG	SOT-23-3	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-T_A=25℃[1]	-5	A
	Continuous Drain Current-T_A=100℃[1]	-3.5	
I_{DM}	Pulsed Drain Current[2]	-20	
E_{AS}	Single pulse avalanche energy[3]	10	mJ
P_D	Power Dissipation	1.4	W
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	89	℃/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	---	---	±10	μA
On Characteristics						
$V_{GS(th)}$	Gate-Source Threshold Voltage	V_{GS}=V_{DS}, I_D=250μA	-1	-1.8	-2.5	V
$R_{DS(ON)}$	Drain-Source On Resistance[3]	V_{GS}=-10V,I_D=-10A	---	25	35	mΩ
		V_{GS}=-4.5V,I_D=-5A	---	35	50	mΩ
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=-15V, V_{GS}=0V, f=1MHz	---	800	---	pF
C_{oss}	Output Capacitance		---	119	---	
C_{rss}	Reverse Transfer Capacitance		---	107	---	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{DS}=-15V, I_D=-10A, R_{ENG}=3Ω ,V_{GS}=-10V	---	13	---	ns
t_r	Rise Time		---	40	---	ns
$t_{d(off)}$	Turn-Off Delay Time		---	50	---	ns
t_f	Fall Time		---	51	---	ns
Q_g	Total Gate Charge	V_{GS}=-10V, V_{DS}=-15V, I_D=-10A	---	48	---	nC
Q_{gs}	Gate-Source Charge		---	6.3	---	nC
Q_{gd}	Gate-Drain “Miller” Charge		---	17	---	nC
Drain-Source Diode Characteristics						
V_{SD}	Diode Forward Voltage	V_{GS}=0V, I_{SD}=-4A	---	---	-1.2	V
I_S	Continuous Drain Current	V_D=V_G=0V	---	---	-4.1	A
I_{SM}	Pulsed Drain Current		---	---	-16.6	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%

Test Circuit

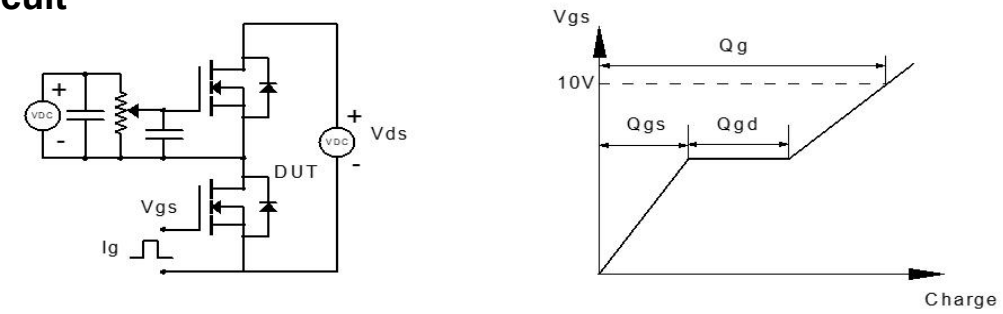


Figure 1: Gate Charge Test Circuit & Waveform

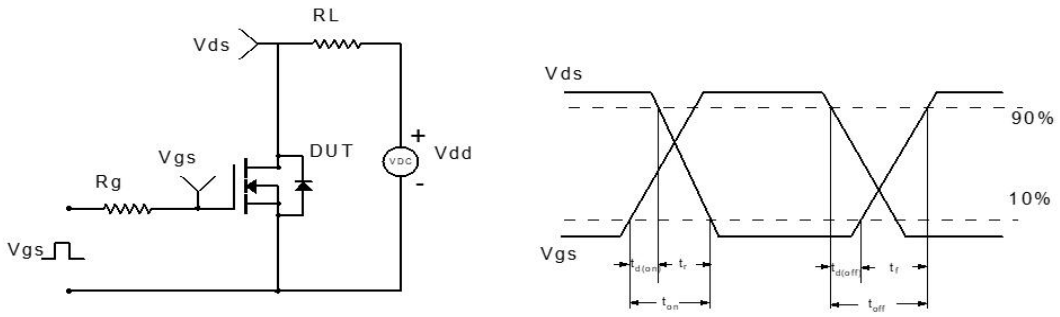


Figure 2: Resistive Switching Test Circuit & Waveform

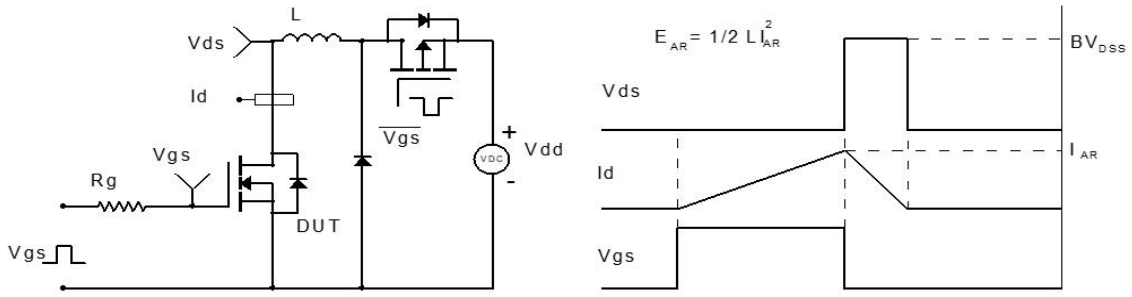


Figure 3: Unclamped Inductive Switching Test Circuit& Waveform

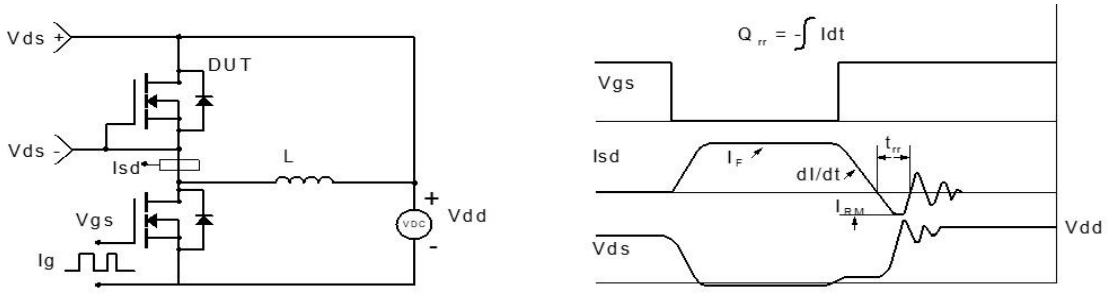
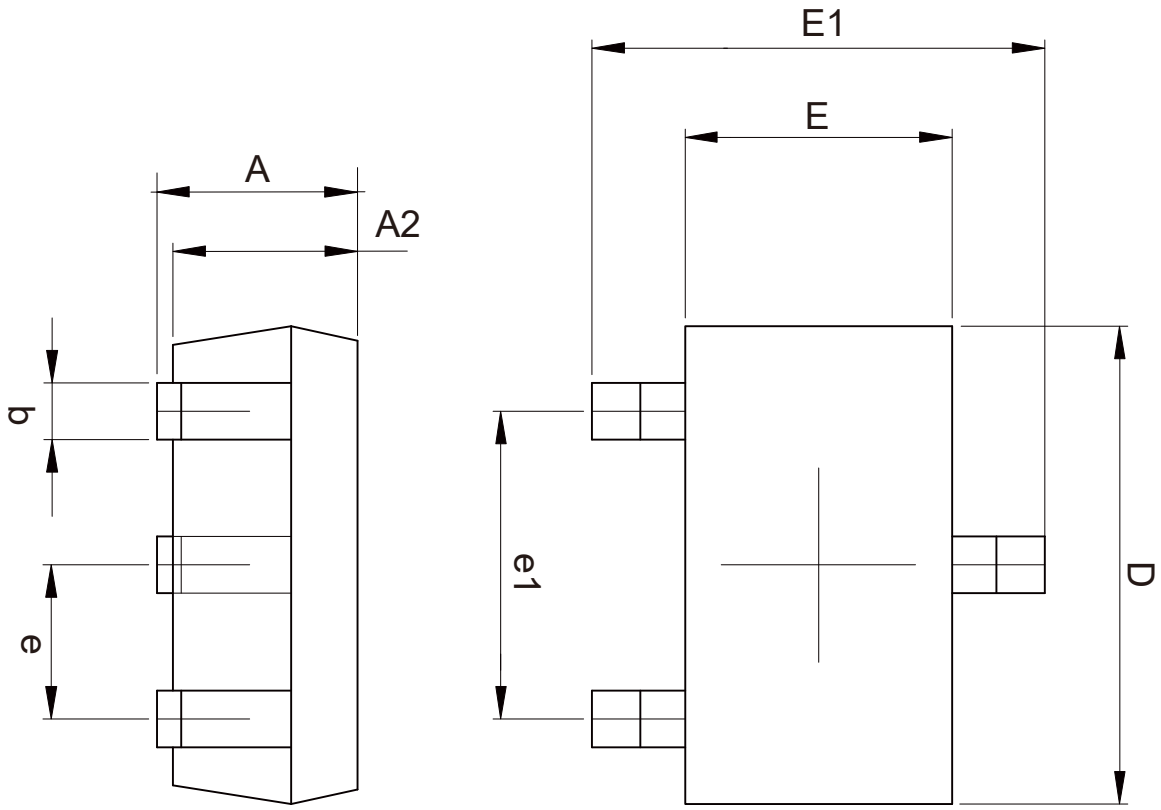
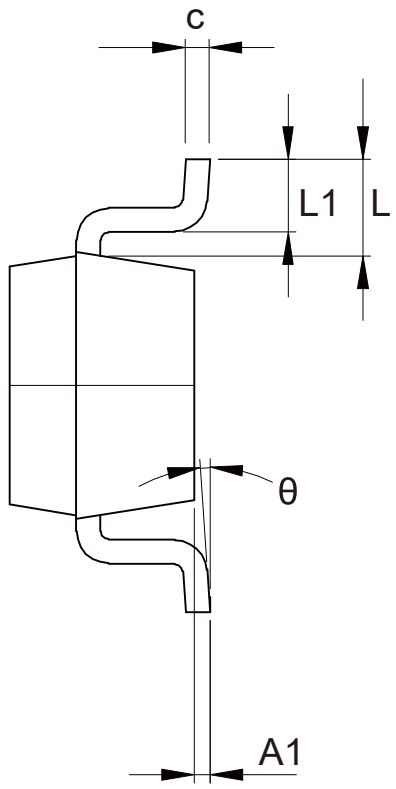


Figure 4: Diode Recovery Test Circuit & Waveform

SOT-23-3Package Outline Data



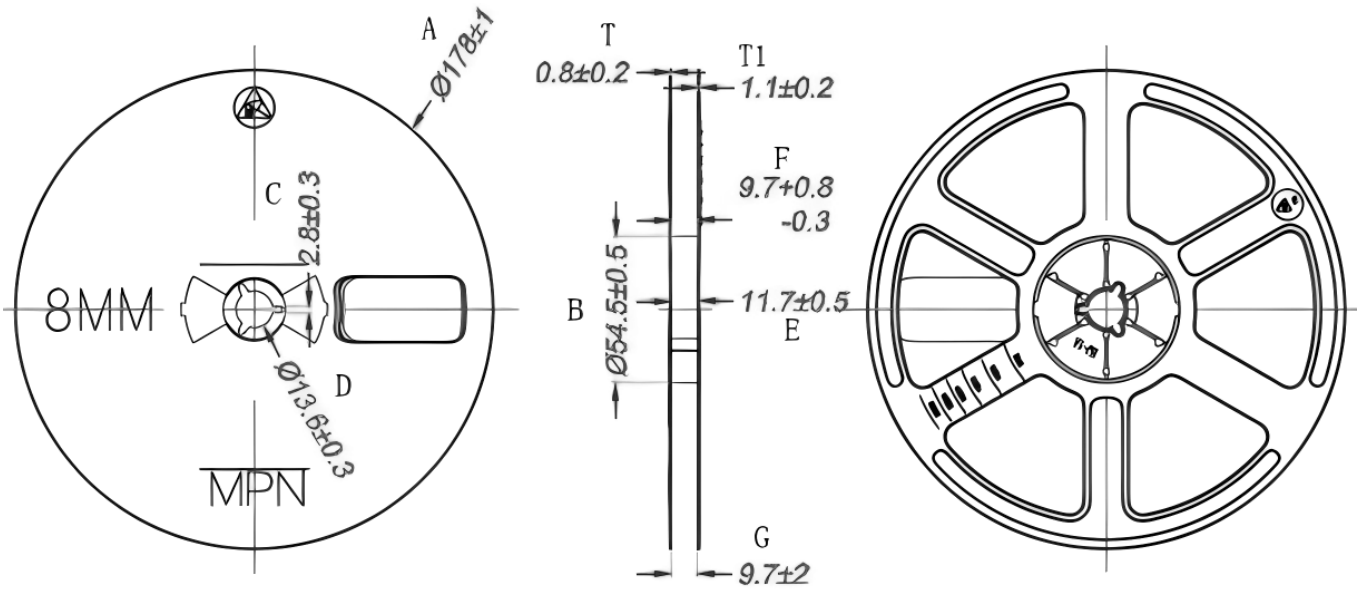


COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER			
SYMBOL	MIN	NOM	MAX
A	1.050	——	1.300
A1	0.000	——	0.200
A2	1.050	——	1.200
b	0.300	0.400	0.500
c	0.100	——	0.200
D	2.820	2.900	3.020
E	1.500	1.600	1.700
E1	2.650	2.800	2.950
e	0.950TYP		
e1	1.800	1.900	2.000
L	0.6REf		
L1	0.300	0.450	0.600
θ	0°	--	8°

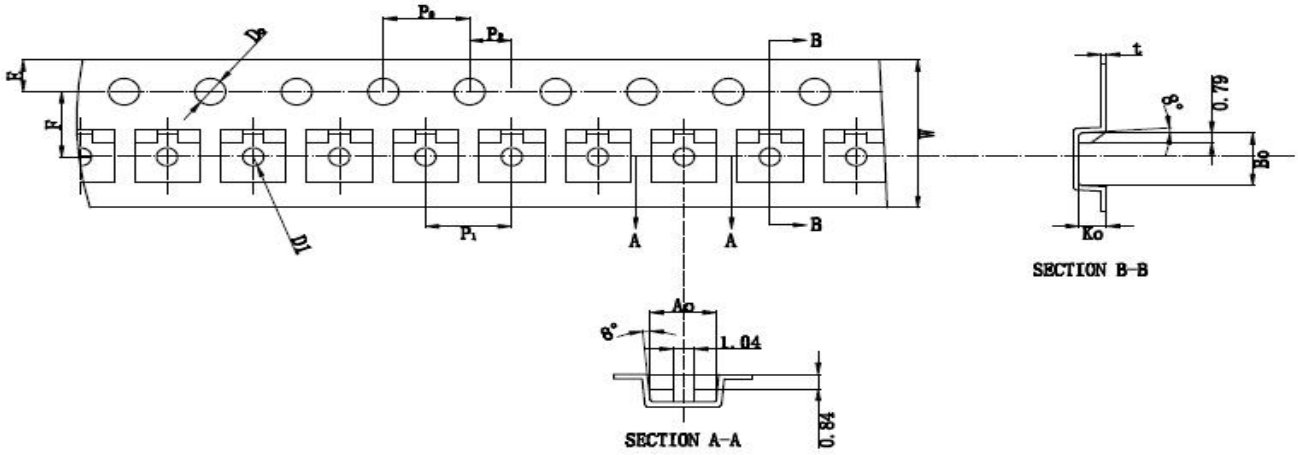
Unit:mm

Tape & Reel Information

Dimensions in mm



PKG TYPE	W	P	E	F	D	D1	Po	Po10	P2	A0	B0	K0	T
SOT23-3	8.00	4.00	1.75	3.50	1.50	1.00	4.00	40.00	2.00	3.13	3.22	1.30	0.20
Tolerance	±0.2	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.2	±0.1	±0.1	±0.1	±0.1	±0.03



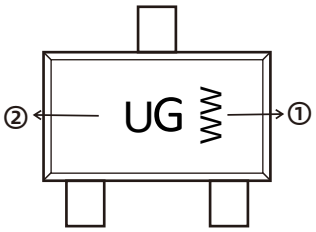
Pulling direction

Marking Information：

①. Date Code(WW)

WW : Week Code(01-53)

②. Part NO.



Previous Version

Version	Date	Subjects (major changes since last revision)
1.0	2026-04-02	Release of final version

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