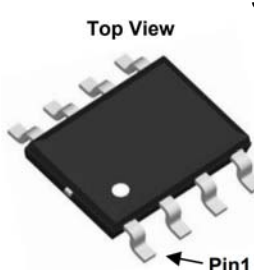
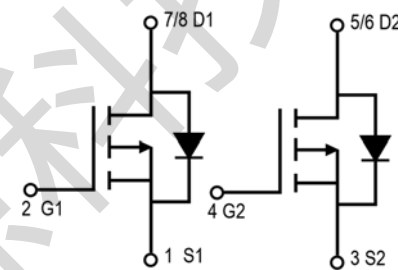


Dual P-Channel High Density Trench MOSFET (-30V,-9A)

PRODUCT SUMMARY

V_{DS}	I_D	$R_{DS(on)}$ (m Ω) Typ.
-30V	-9A	13@ $V_{GS} = 10V, I_D = -9A$
		18@ $V_{GS} = 4.5V, I_D = -4A$

Features	Applications
- Super high density cell design for extremely low $R_{DS(ON)}$ - Exceptional on-resistance and maximum DC current capability - Excellent $Q_g \times R_{DS(ON)}$ product (FOM) - Lead (Pb) -free and halogen-free	- Motor control and drive - Load Switch

SOP-8L		TOP Marking
 Pin 1: P Source1 PIN 2: P Gate1 PIN 3: P Source2 PIN 4: P Gate2 PIN 5/6: P Drain2 PIN 7/8: P Drain1		ET4805A XXXXXX
		XXXXXX:D/C

Absolute Maximum Ratings (T_A=25°C, unless otherwise noted)

Symbol	Parameter	Max P	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current (Continuous)@T _A =25°C	-9	A
	Drain Current (Continuous)@T _A =75°C	-6	A
I_{DM}	Drain Current (Pulsed) ^a	-50	A
P_D	Total Power Dissipation @T _c =25°C	2.0	W
	Total Power Dissipation @T _c =75°C	1.5	W
I_S	Maximum Diode Forward Current	2.6	A
T _j , T _{stg}	Operating Junction and Storage Temperature Range	-55 to +150	°C
R _{QJA}	Thermal Resistance Junction to Ambient (PCB mounted) ^b	70	°C/W

a: Repetitive Rating: Pulse width limited by the maximum junction temperature.

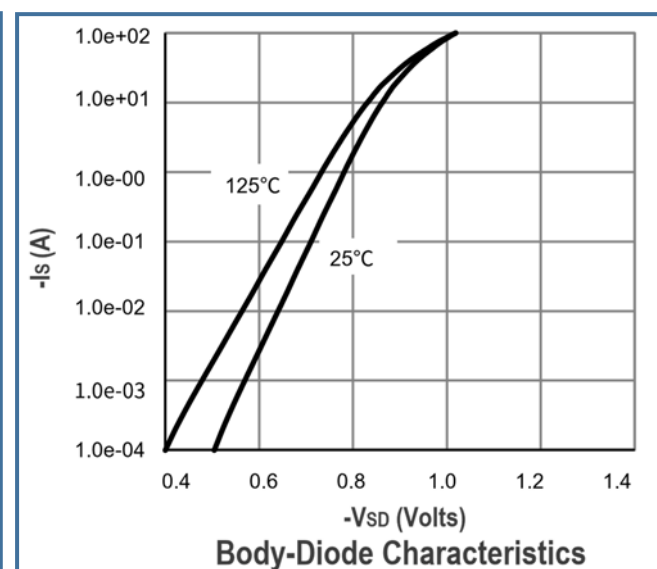
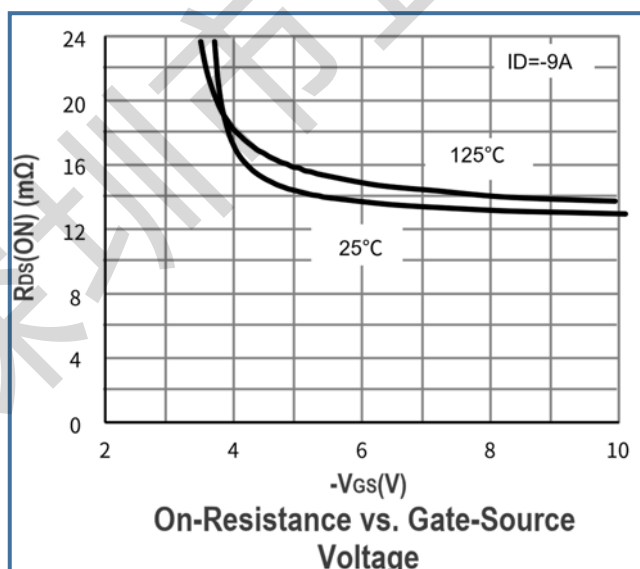
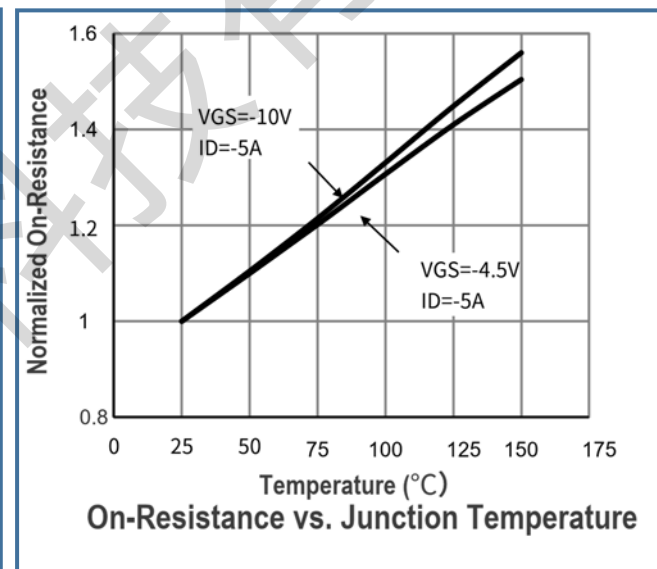
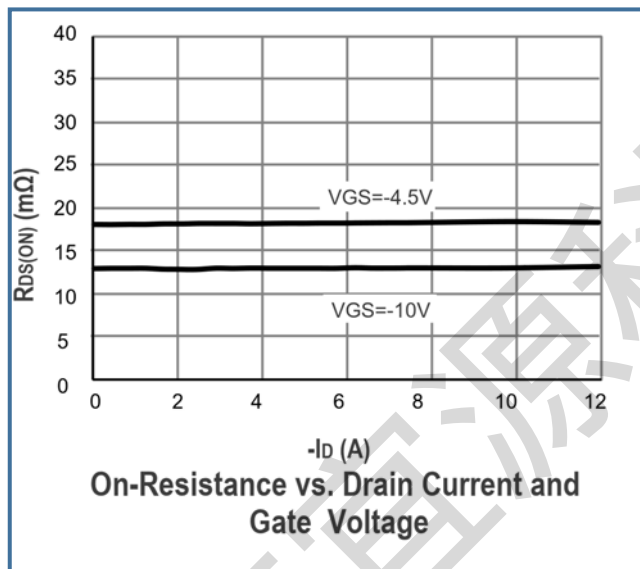
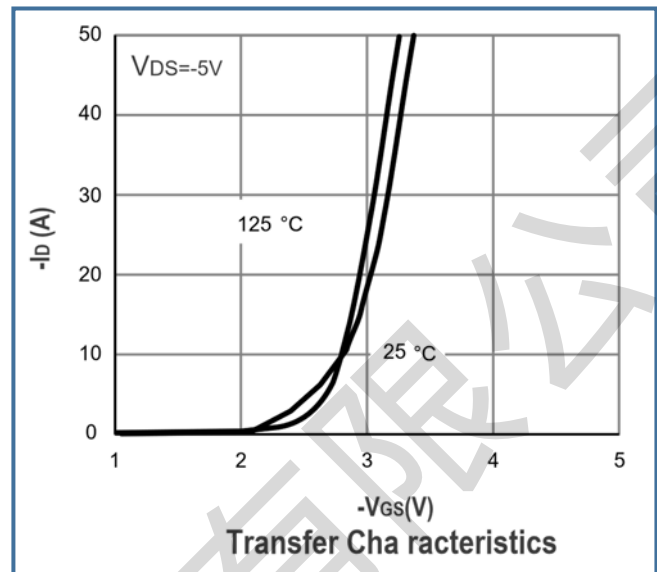
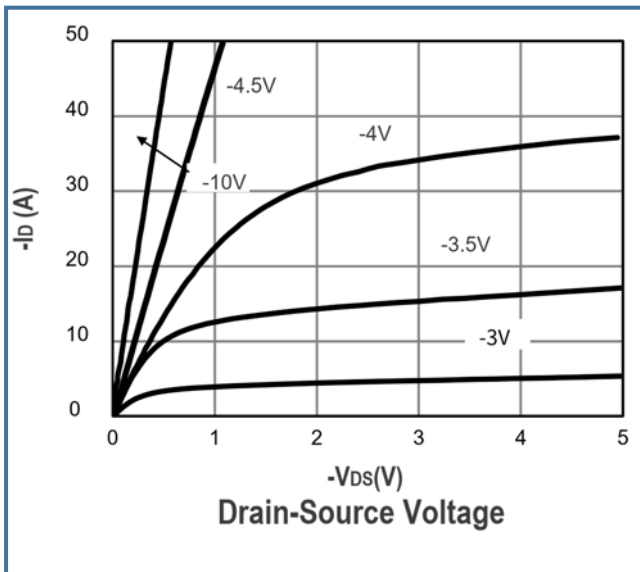
b: 1-in² 2oz Cu PCB board

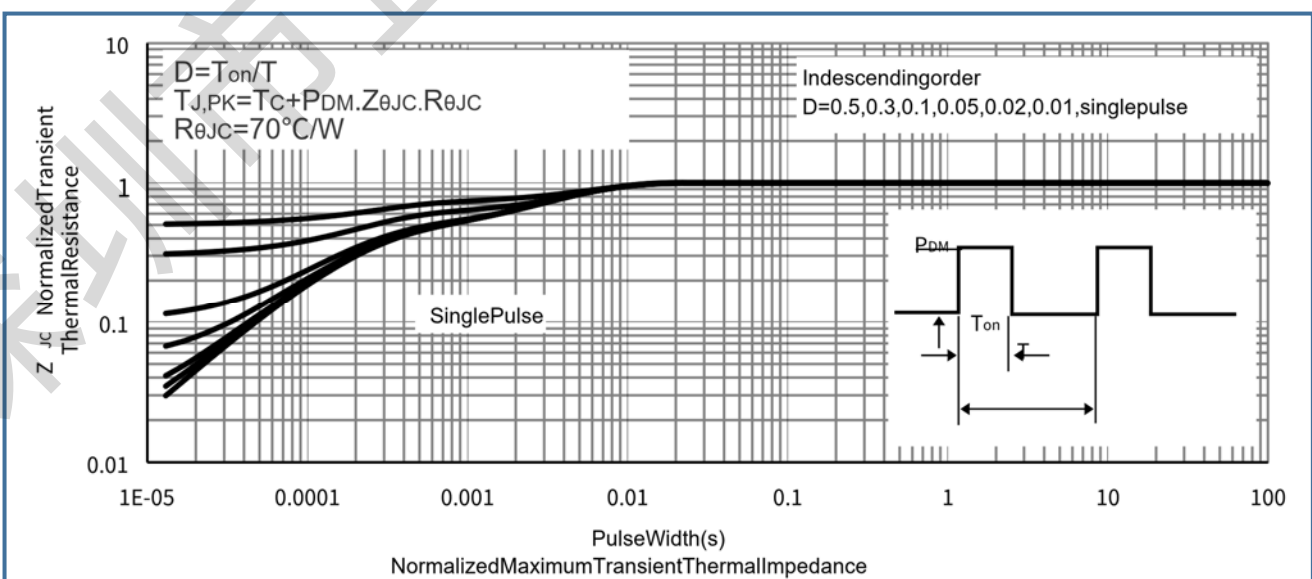
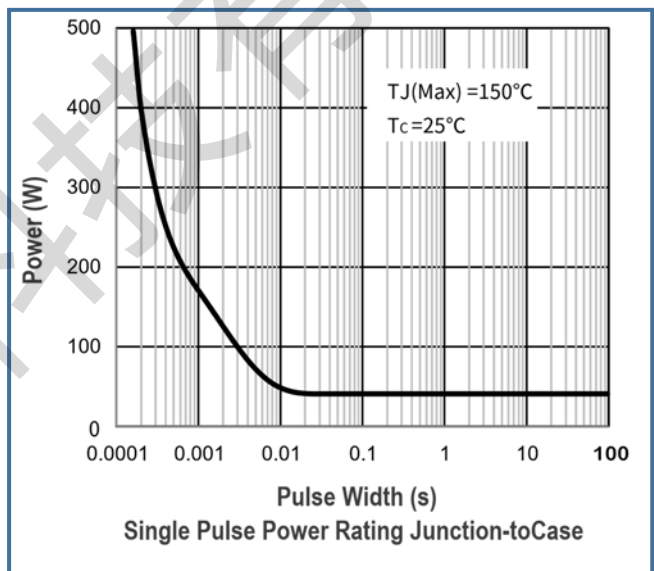
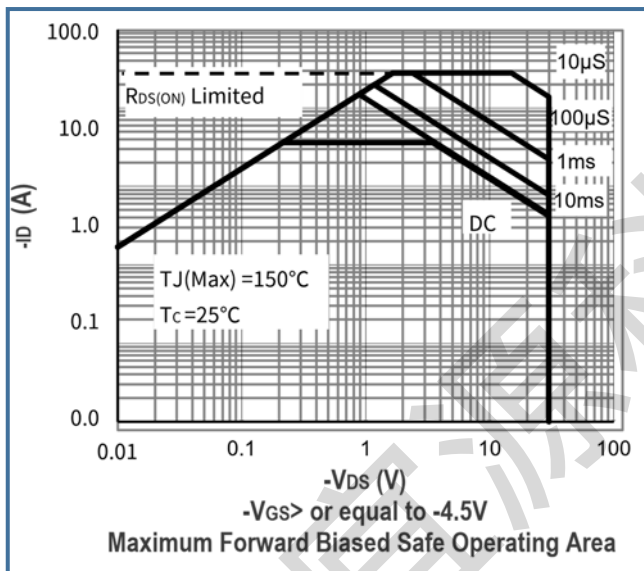
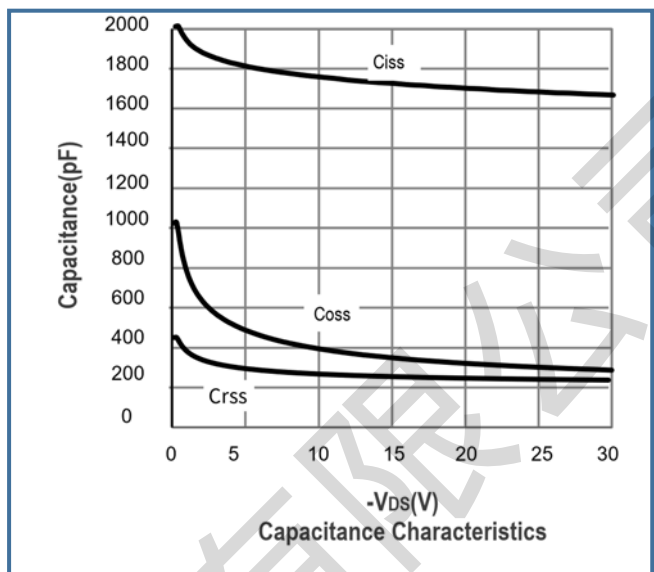
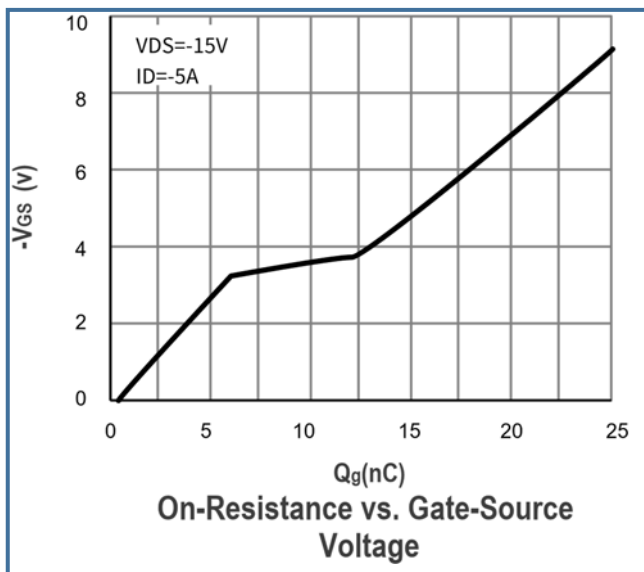
P-Channel Electrical Characteristics (TA=25°C, unless otherwise noted)

Symbol	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
• Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250uA	-30	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-30V, V _{GS} =0V	-	-	-1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
• On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250uA	-1.0	-1.6	-2.0	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =-10V, I _D =-9.0A	-	13	15	mΩ
		V _{GS} =-4.5V, I _D =-4.0A	-	18	23	
g _{fs}	Forward Transconductance	V _{DS} =-10V, I _D =-2.6A		25		S
• Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =-15V, V _{GS} =0V, f=1MHz	-	1600	-	PF
C _{oss}	Output Capacitance		-	350	-	
C _{rss}	Reverse Transfer Capacitance		-	300	-	
• Switching Characteristics						
Q _g	Total Gate Charge	V _{DS} =-15V, I _D =-5A, V _{GS} =-10V	-	28	-	nC
Q _{gs}	Gate-Source Charge		-	5.5	-	
Q _{gd}	Gate-Drain Charge		-	8	-	
t _{d(on)}	Turn-on Delay Time	V _{DD} =-15V, R _L =15Ω, I _D =-5A, V _{GEN} =-10V, R _G =3Ω	-	11	-	nS
t _r	Turn-on Rise Time		-	9.5	-	
t _{d(off)}	Turn-off Delay Time		-	44	-	
t _f	Turn-off Fall Time		-	12	-	
• Drain-Source Diode Characteristics						
V _{SD}	Drain-Source Diode Forward Voltage	V _{GS} =0V, I _S =-9.0A	-	-	-1.2	V
R _g	Gate resistance	V _{GS} =0V, V _{DS} =0V, F=1MHz	-	1.5	-	Ω

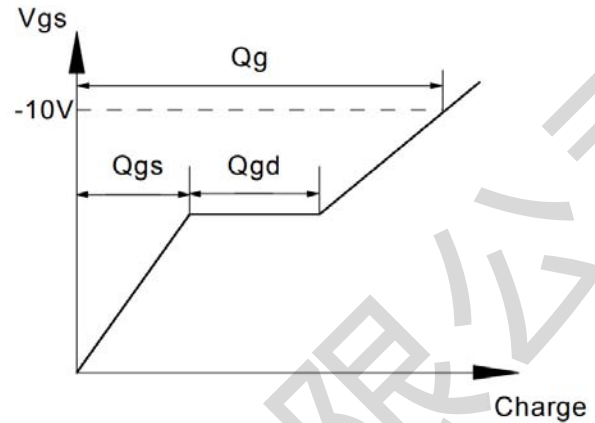
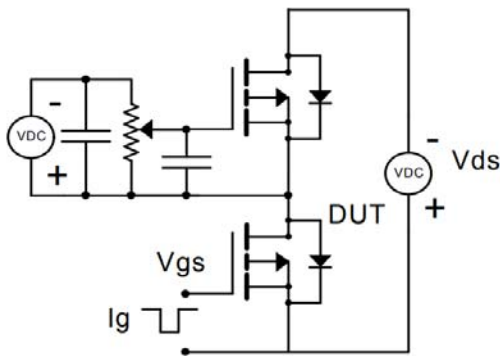
Note: Pulse Test: Pulse Width≤300us, Duty Cycle≤2%

P-Channel Typical Characteristics Curves (Ta=25°C, unless otherwise note)

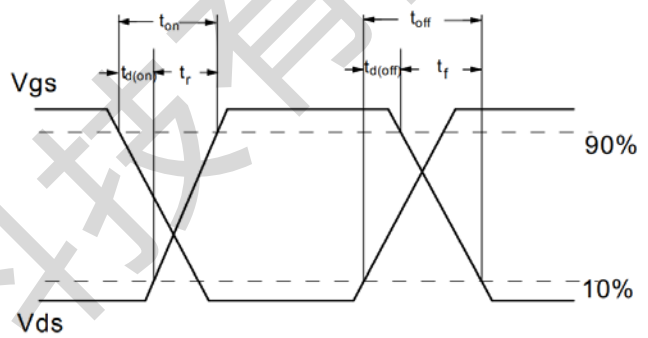
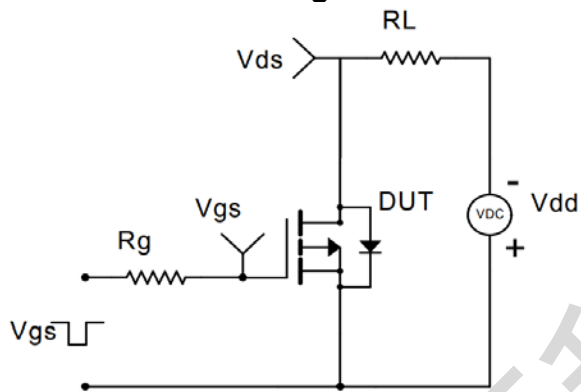




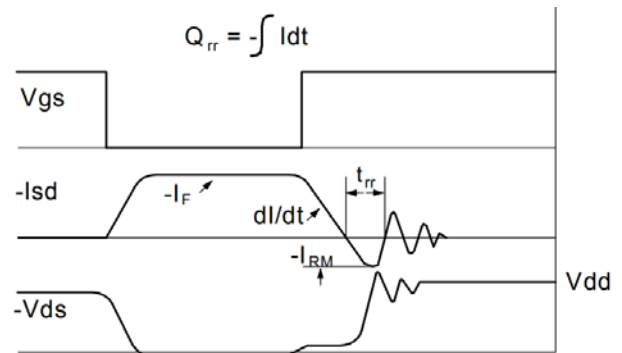
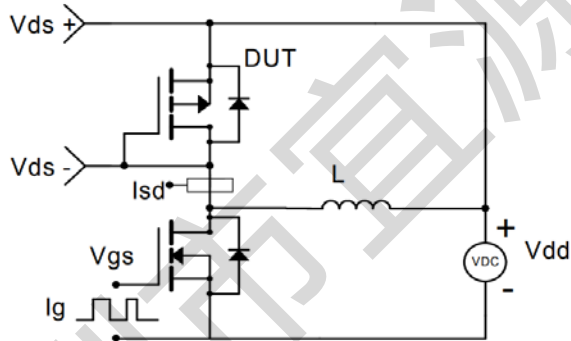
P Gate Charge Test Circuit & Waveforms



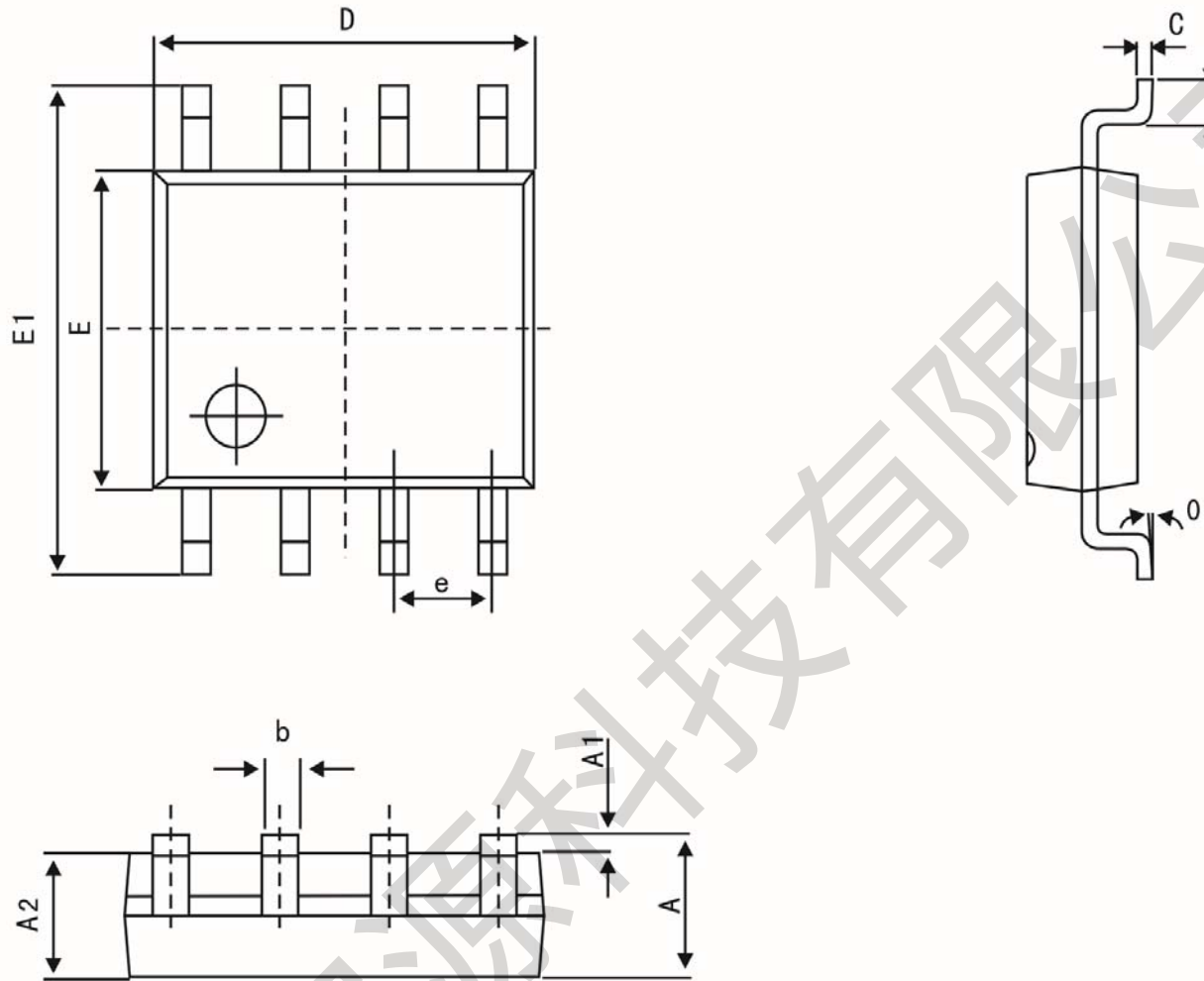
P Resistive Switching Test Circuit & Waveforms



P Diode Recovery Test Circuit & Waveforms



SOP-8L Package Outline Data



Symbol	Dimensions In Millimeters (MM)		Dimensions In Inches (MIL)	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270 (BSC)		0.050 (BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°