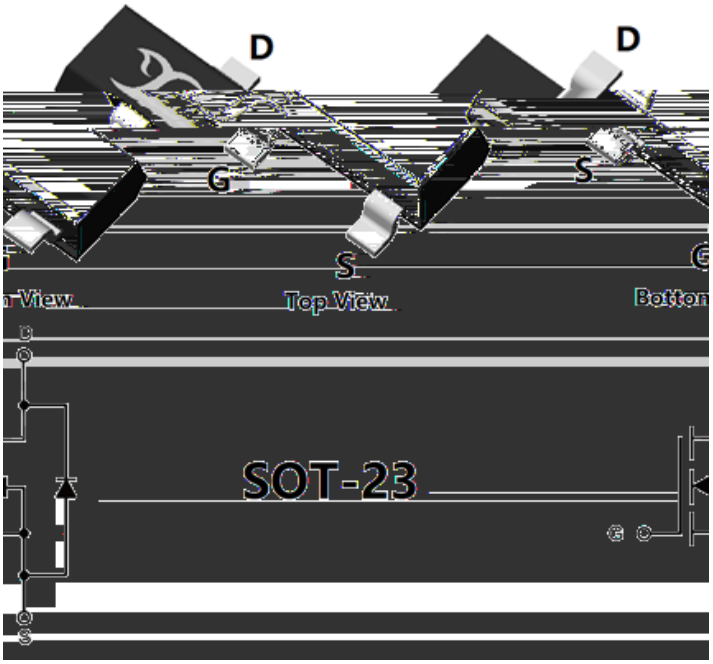
N-Channel Enhancement Mode Field Effect Transistor



Product Summary

- V_{DS} 30V
- I_D 5A
- $R_{DS(ON)}$(at V_{GS}=4.5V) 30mq
- $R_{DS(ON)}$(at V_{GS}=2.5V) 35mq
- $R_{DS(ON)}$(at V_{GS}=1.8V) 50mq

General Description

- Trench Power MV MOSFET technology
- Voltage controlled small signal switch
- Low input Capacitance
- Fast Switching Speed
- Low Input / Output Leakage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

Applications

- Battery operated systems
- Solid-state relays
- Direct logic-level interface TTL/CMOS

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	30	V
Gate-source Voltage		V_{GS}	±12	V
Drain Current	T_A=25	I_D	5	A
	T_A=100		3	
Pulsed Drain Current [A]		I_{DM}	30	A
Total Power Dissipation [B]	T_A=25	P_D	1	W
	T_A=100		0.4	
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient [C]	Steady-State	$R_{\theta JA}$	100	125	/W

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJL3400C	F2	3400C.	3000	30000	120000	7ñreel

y' Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=250εA	30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V,				

Typical Electrical and Thermal Characteristics Diagrams

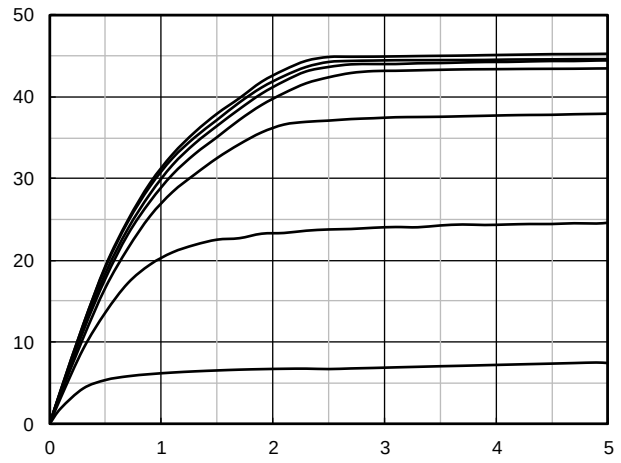


Figure 1. Output Characteristics

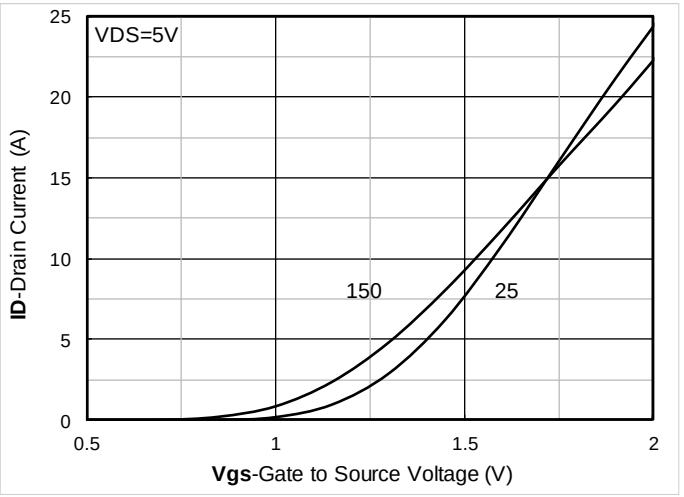


Figure 2. Transfer Characteristics

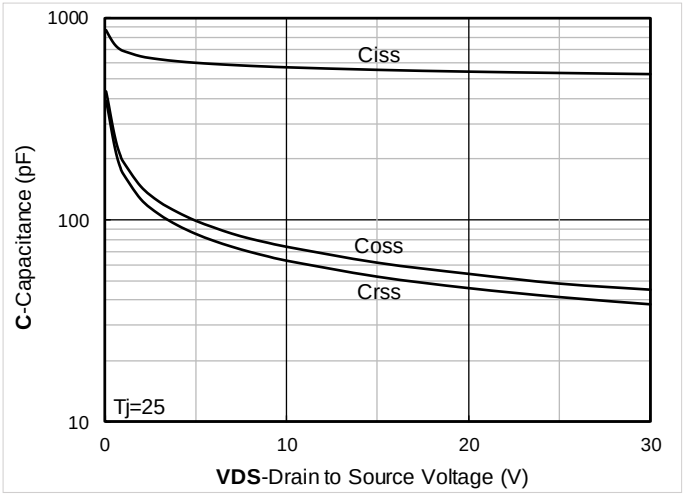


Figure 3. Capacitance Characteristics

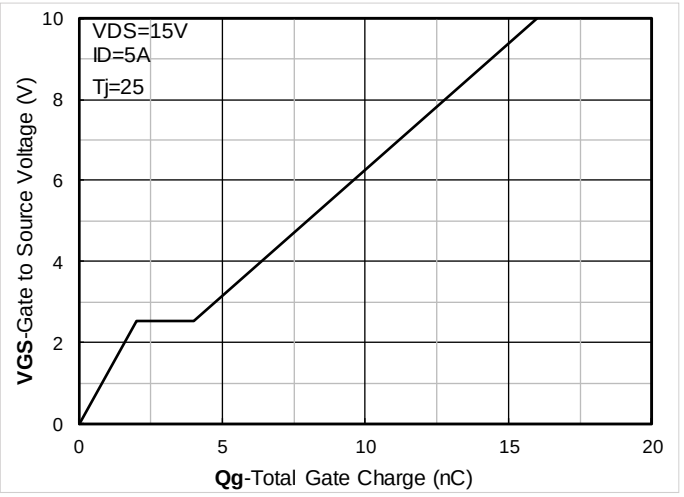


Figure 4. Gate Charge

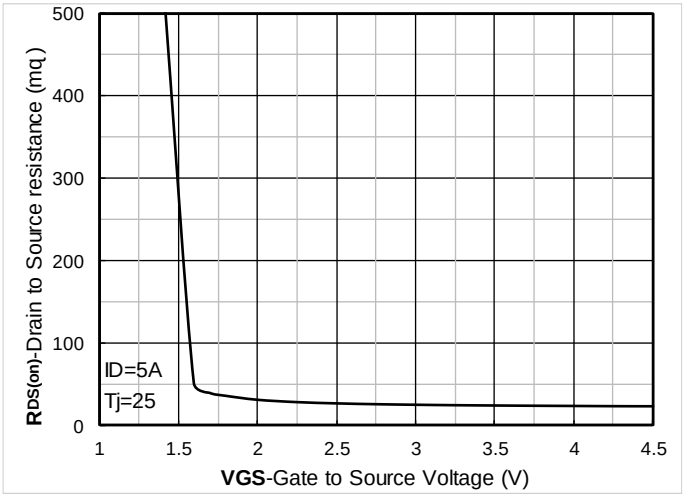


Figure 5. On-Resistance vs Gate to Source Voltage

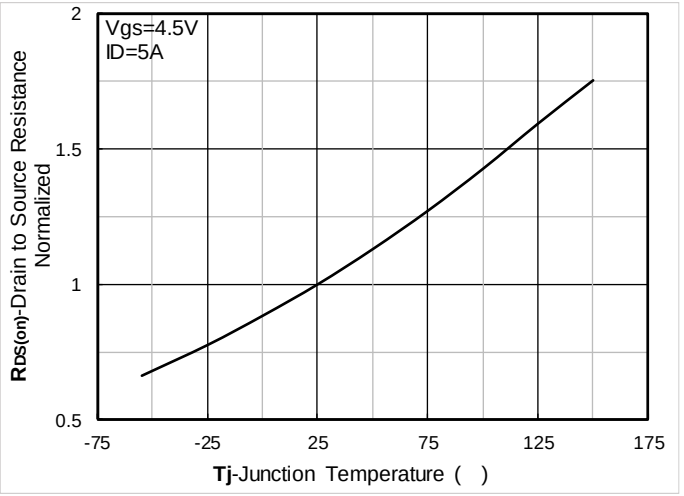


Figure 6. Normalized On-Resistance

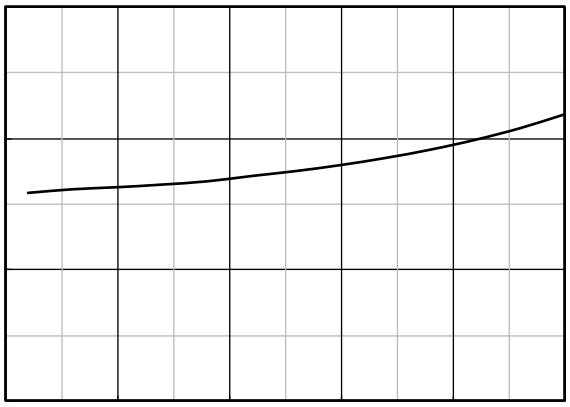


Figure 7. $R_{DS(on)}$ VS Drain Current

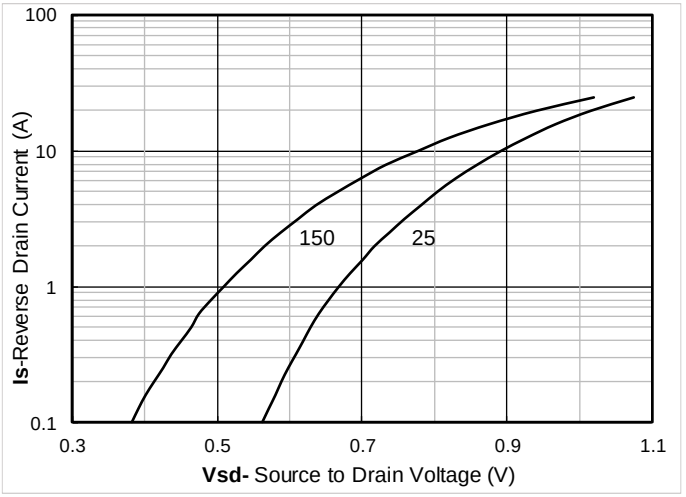


Figure 8. Forward characteristics of reverse diode

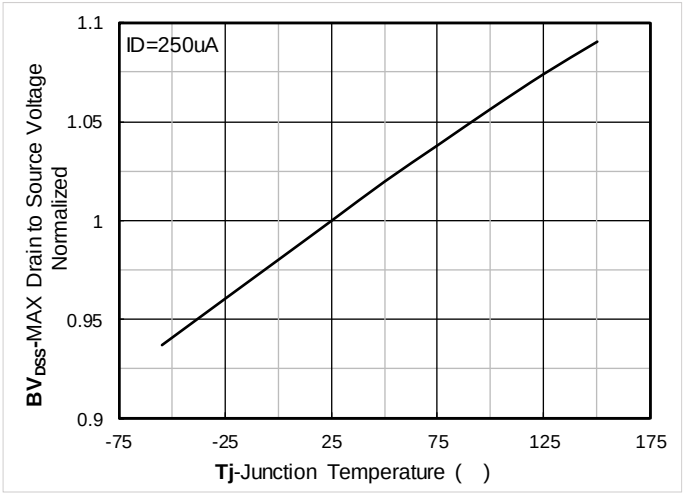


Figure 9. Normalized breakdown voltage

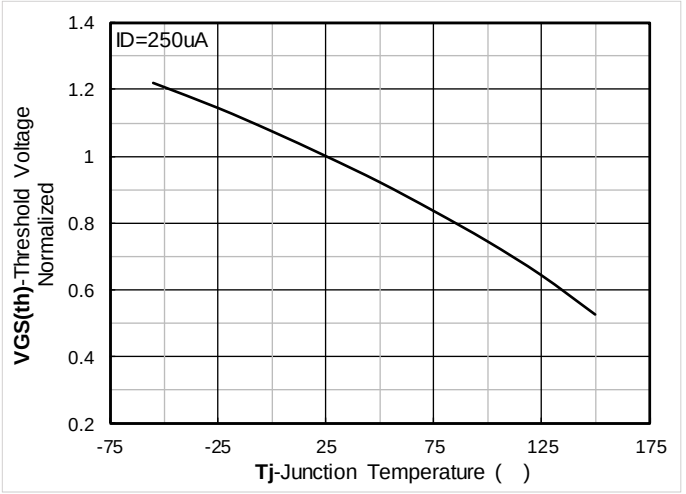


Figure 10. Normalized Threshold voltage

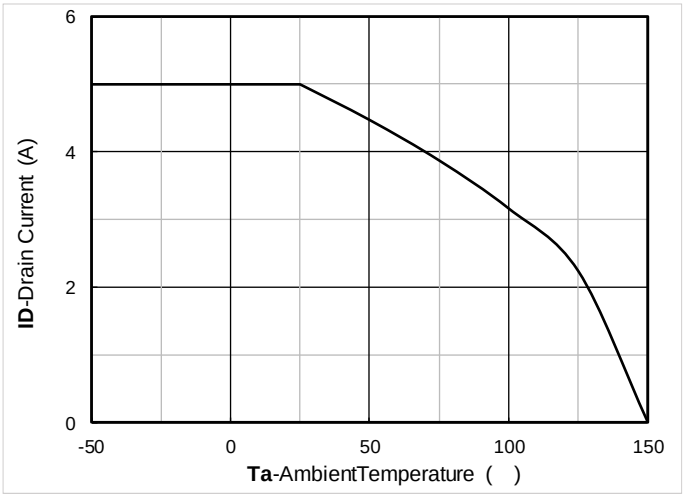


Figure 11. Current dissipation

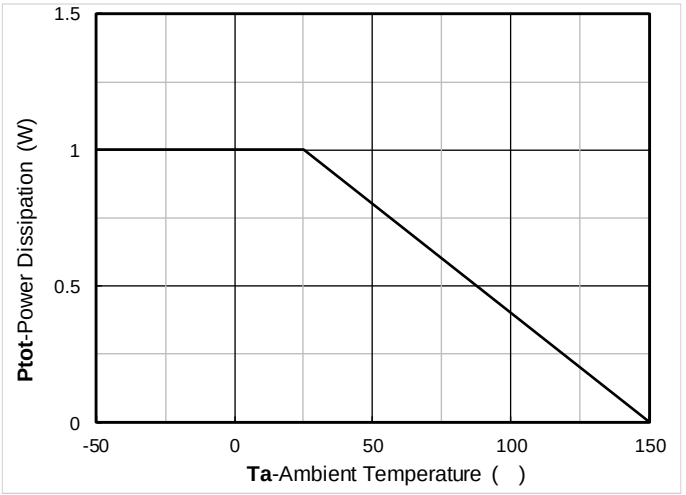


Figure 12. Power dissipation

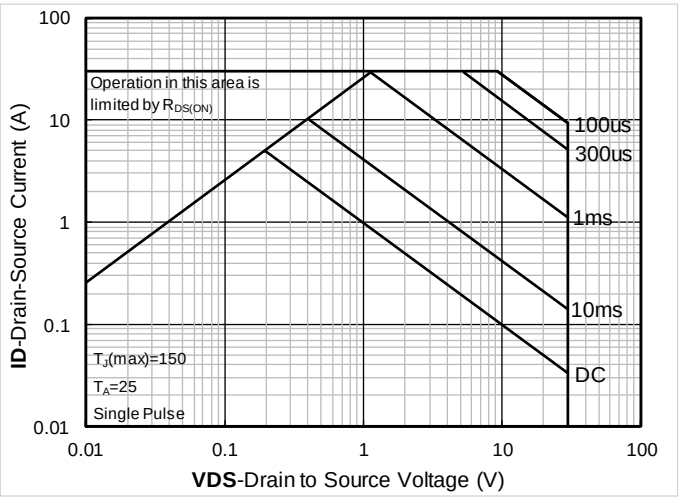


Figure 13. Maximum Transient Thermal Impedance

Figure 14. Safe Operation Area

y Test Circuits & Waveforms

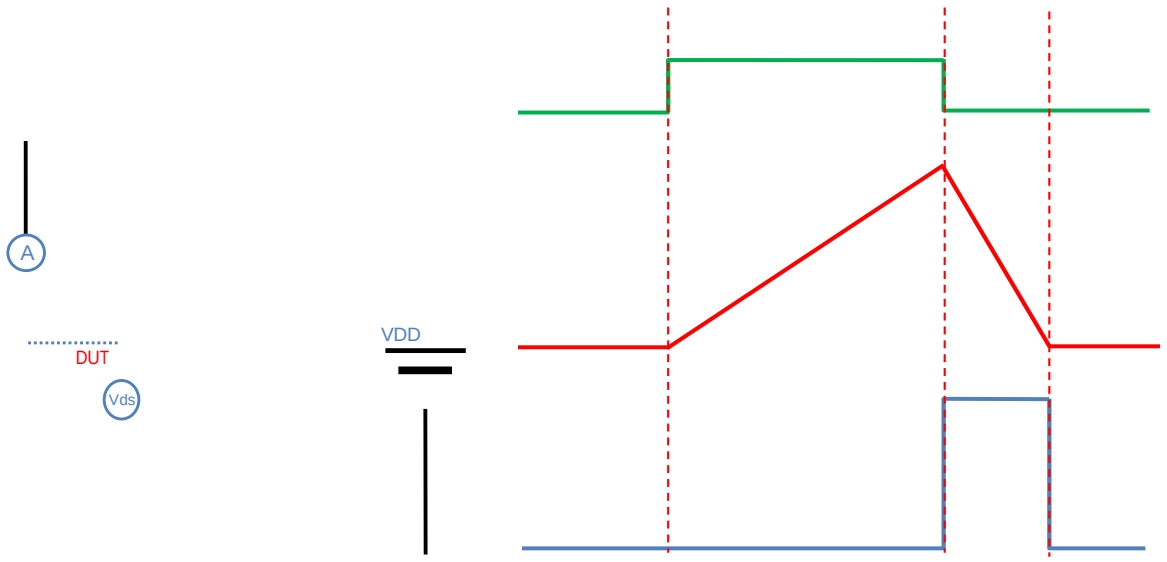


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

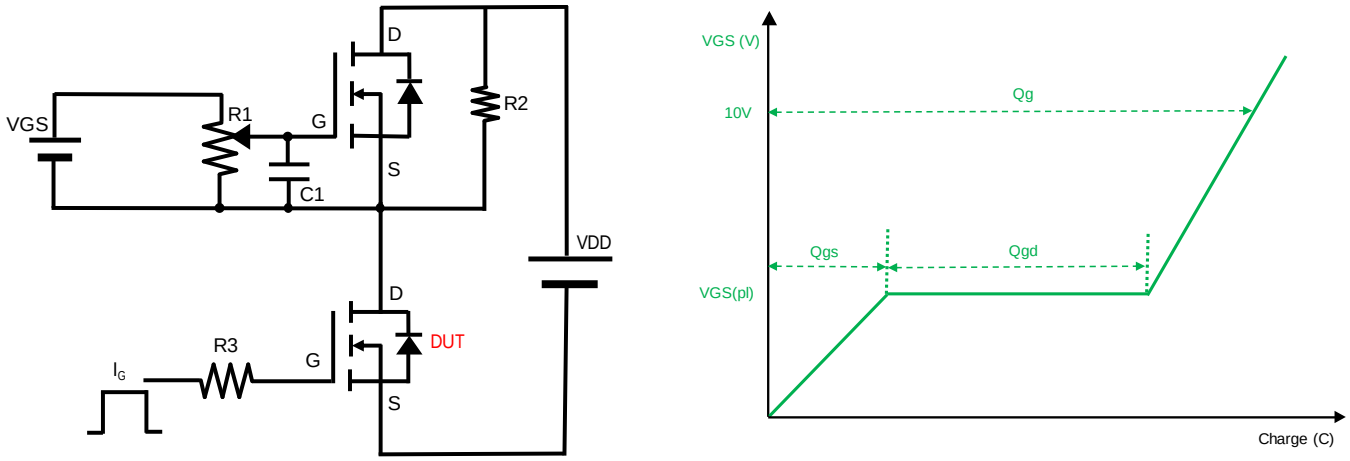


Figure B. Gate Charge Test Circuit & Waveform

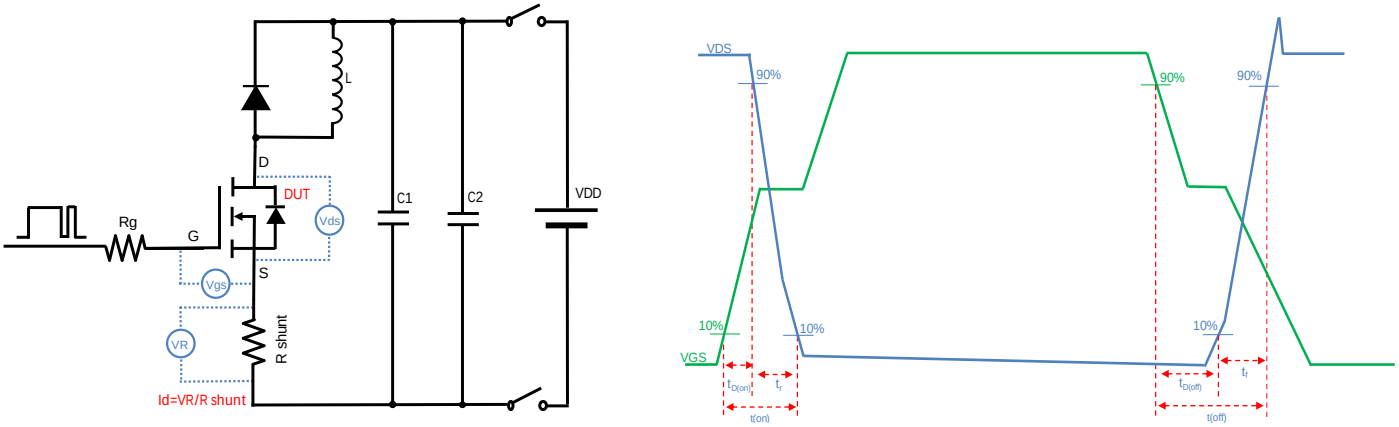


Figure C. Resistive Switching Test Circuit & Waveform

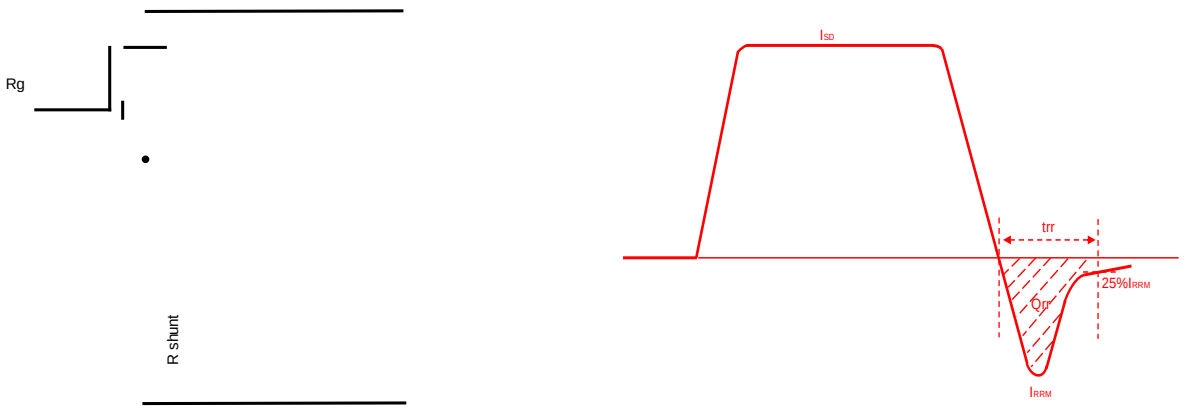
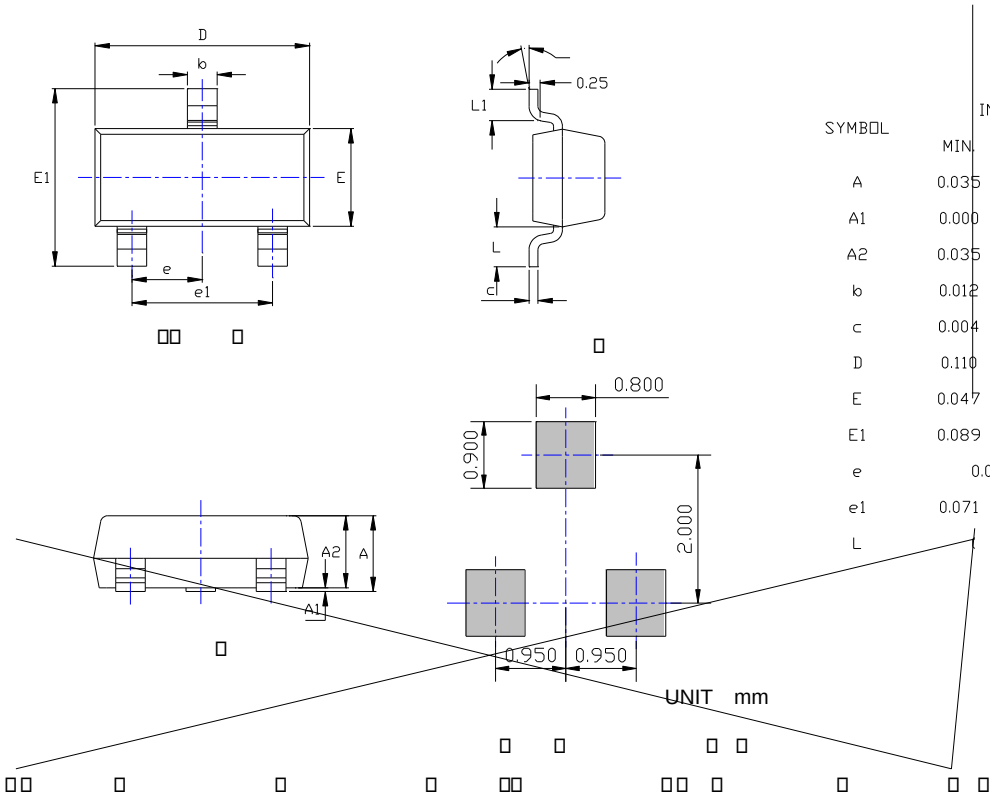


Figure D. Diode Recovery Test Circuit & Waveform

SOT-23 Package information



SYMBOL	DIMENSIONS INCHES MIN.	INCHES MAX.	Millimeter MIN.	Millimeter MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L				

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