■ Electrical Characteristic s (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=250μA	30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V	-	-	1	μA
		V_{DS}=30V, V_{GS}=0V, Tj=150	-	-	100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±12V, V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	0.5	0.95	1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=5A	-	28	37	mΩ
		V_{GS}=4.5V, I_D=4A	-	30	40	
				38	55	
Diode Forward Voltage	V_{SD}	I_S=5A, V_{GS}=0V	-	-	1.2	V
Gate resistance	R_G	f=1MHz	-	2.5	-	Ω
Maximum Body-Diode Continuous Current	I_S		-	-	5	A
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=15V, V_{GS}=0V, f=1MHz	-	425	-	pF
Output Capacitance	C_{oss}		-	45	-	
Reverse Transfer Capacitance	C_{rss}		-	35	-	
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=15V, I_D=5A	-	10.3	-	nC
Gate-Source Charge	Q_{gs}		-	0.8	-	
Gate-Drain Charge	Q_{gd}		-	1.8	-	
Reverse Recovery Charge	Q_{rr}	I_F=5A, di/dt=100A/us	-	6	-	nC

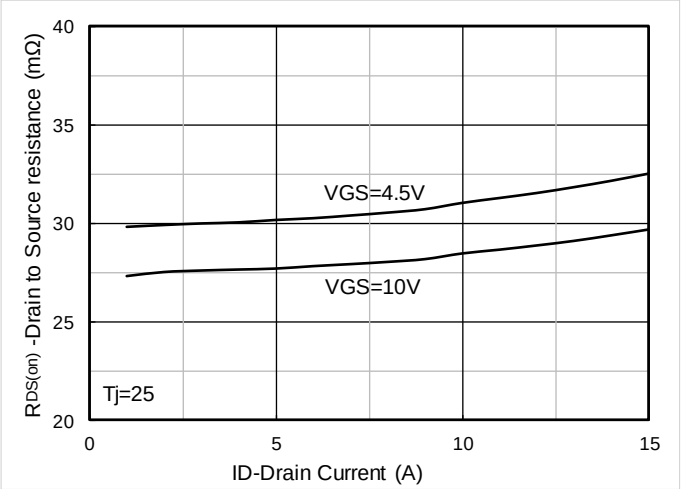


Figure 7. $R_{DS(on)}$ VS Drain Current

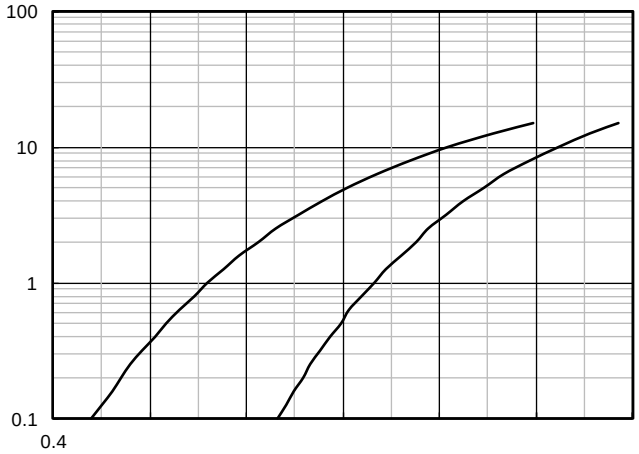


Figure 8. Forward characteristics of reverse diode

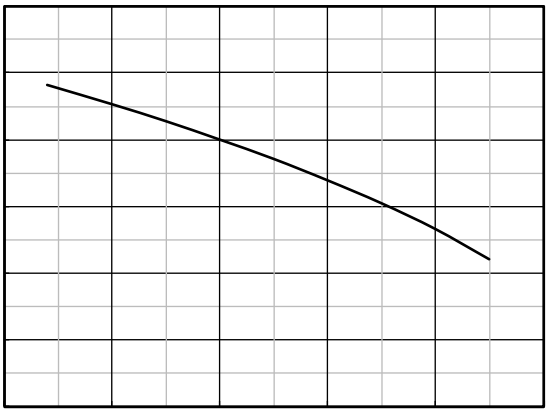


Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage

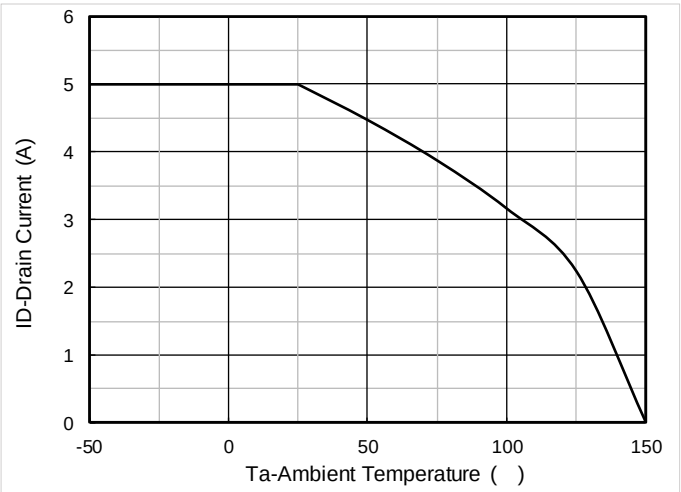


Figure 11. Current dissipation

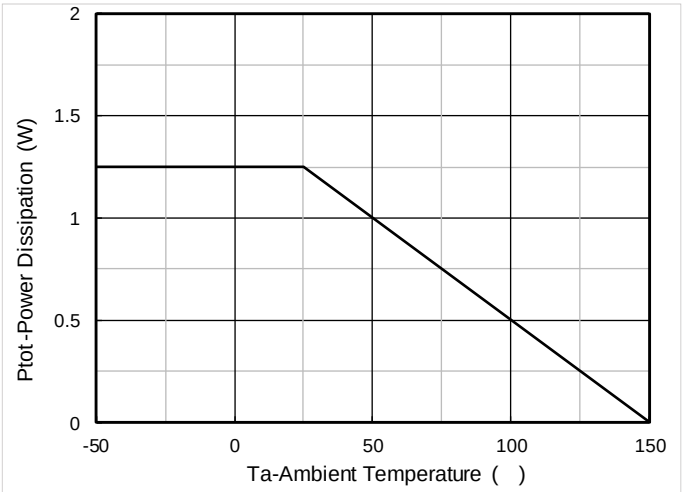


Figure 12. Power dissipation

Figure 13. Maximum Transient Thermal Impedance

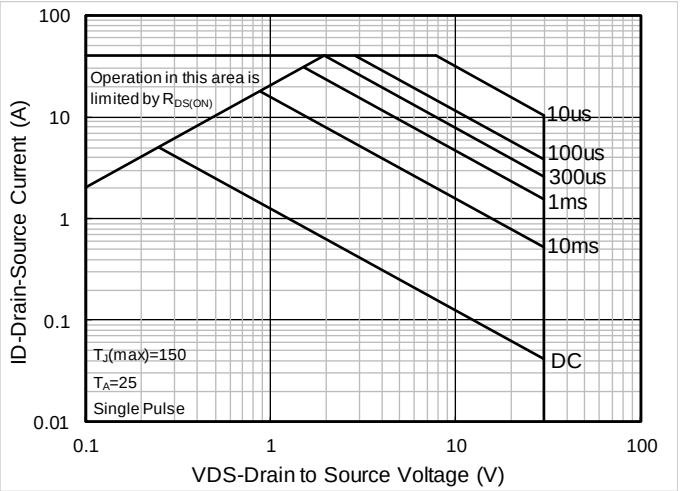


Figure 14. Safe Operation Area

■ Test Circuit s & Waveforms

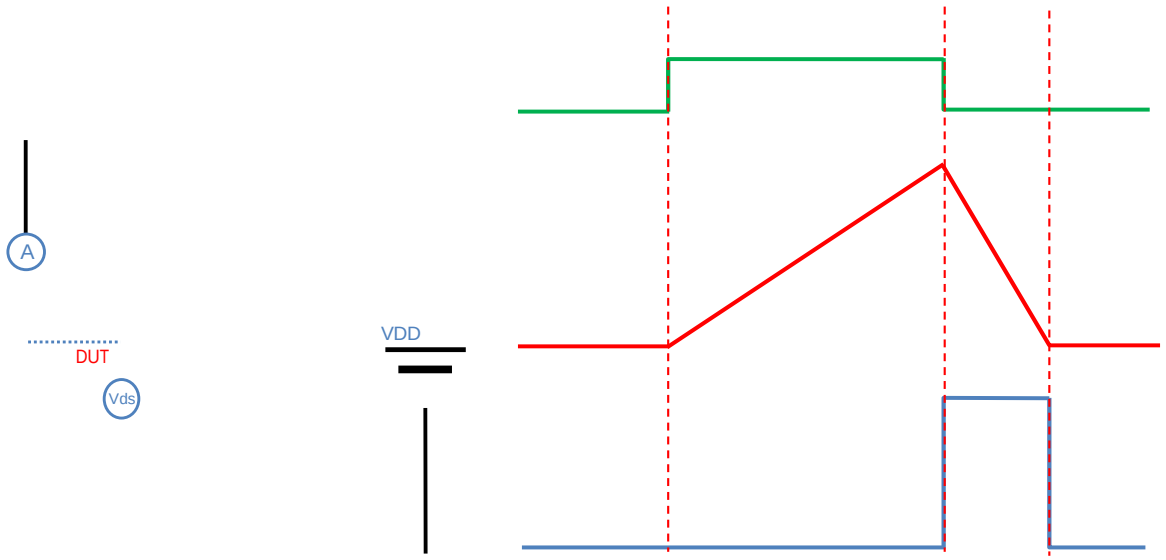


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

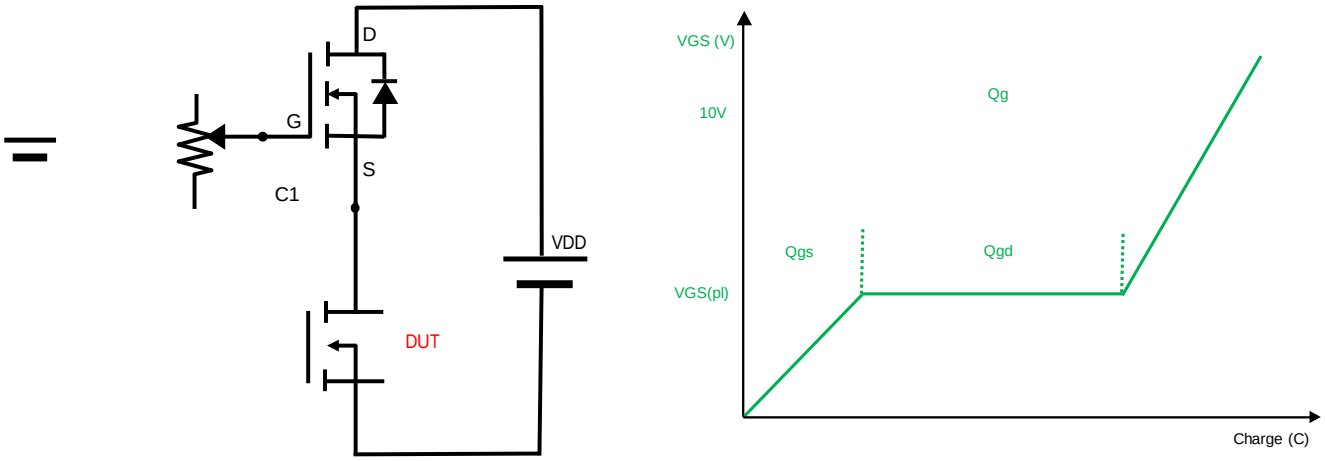


Figure B. Gate Charge Test Circuit & Waveform

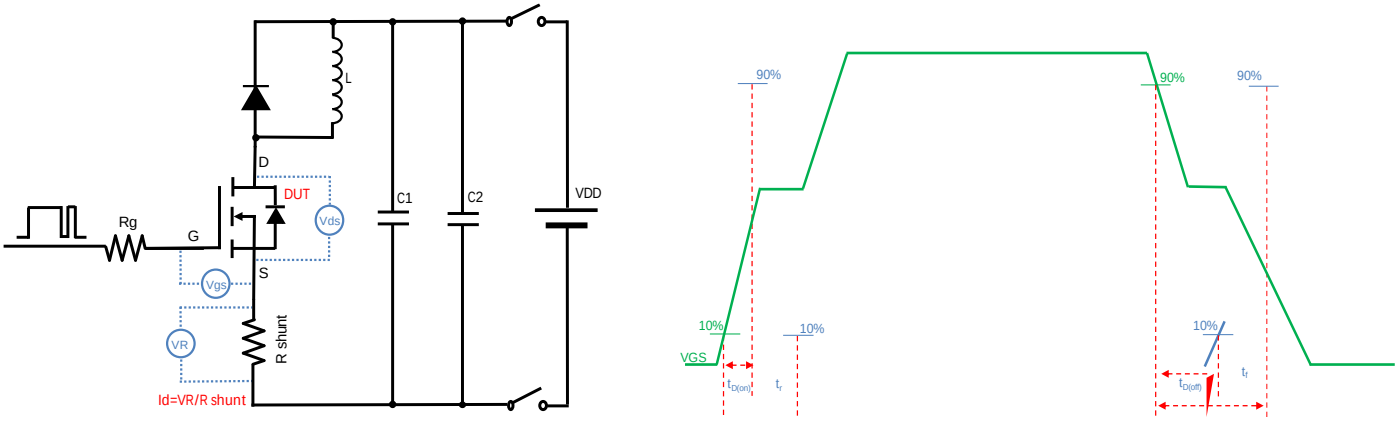


Figure C. Resistive Switching Test Circuit & Waveform

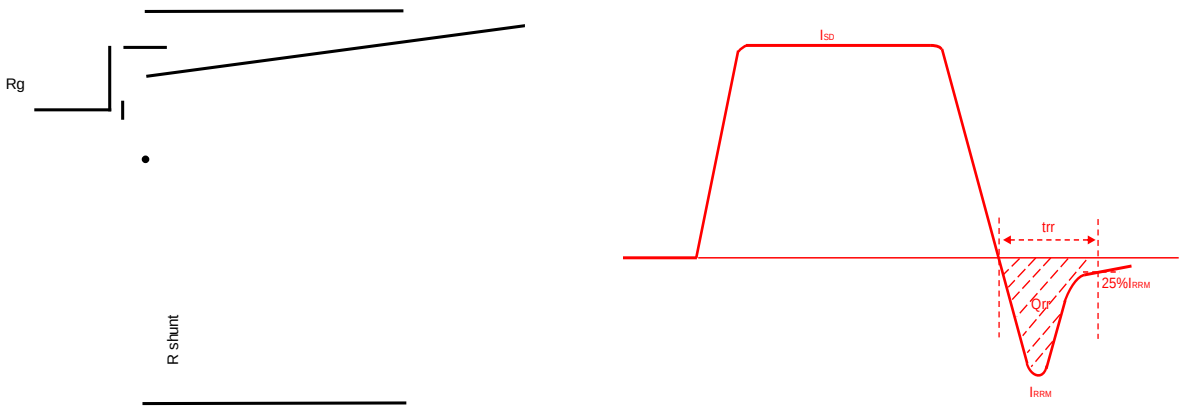
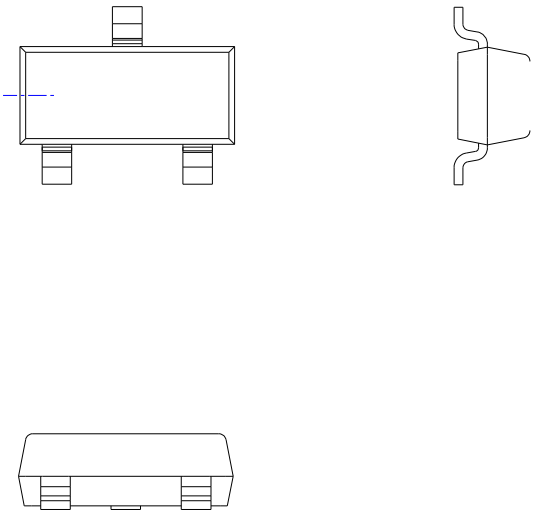


Figure D. Diode Recovery Test Circuit & Waveform

■ SOT-23 Package Information



UNIT mm