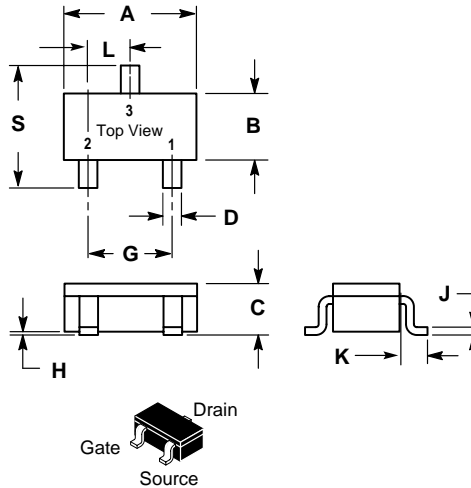
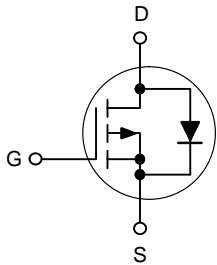


RoHS Compliant Product

Features

- * Super High Dense Cell Design For Low $R_{DS(ON)}$
- * Rugged And Reliable
- * SOT-23 Package



SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D @ T_J = 125^\circ C$	-185	mA
Drain-Source Diode Forward Current ¹	I_S	-1	A
Pulsed Drain Current ²	I_{DM}	-250	mA
Total Power Dissipation ¹	$P_D @ T_A = 25^\circ C$	360	mW
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^\circ C$

Thermal Data

Parameter	Symbol	Ratings	Unit
Thermal Resistance Junction-ambient ¹	R_{thj-a}	350	$^\circ C/W$

Electrical Characteristics(T_j=25°C Unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Drain-Source Breakdown Voltage	BV _{DSS}	-60	-	-	V	V _{GS} =0V, I _D =-10uA
Forward On Voltage	V _{SD}	-	-0.75	-1.4	V	I _D =-200 mA, V _{GS} =0V.
Gate Threshold Voltage	V _{GS(th)}	-1	-	-3	V	V _{DS} =V _{GS} , I _D =-250 uA
Gate-Source Leakage Current	I _{GSS}	-	-	±10	uA	V _{GS} =±20V, V _{DS} =0V
Drain-Source Leakage Current (T _j =25°C)	I _{DSS}	-	-	-1	uA	V _{DS} =-60V, V _{GS} =0
Static Drain-Source On-Resistance	R _{DS(ON)}	-	-	7.5	Ω	V _{GS} =-10V, I _D =-0.5A
		-	-	10		V _{GS} =-4.5V, I _D =-0.025A
On-State Drain Current	I _{D(ON)}	600	-	-	mA	V _{DS} =-10V, V _{GS} =-10V
Turn-on Delay Time	T _{d(ON)}	-	2.8	-	nS	V _{DD} =-25V I _D =-120mA V _{GS} =-10V R _G =6 Ω
Rise Time	T _r	-	6.5	-		
Turn-off Delay Time	T _{d(OFF)}	-	10	-		
Fall Time	T _f	-	7.2	-		
Input Capacitance	C _{iss}	-	80	-	pF	V _{GS} =0V V _{DS} =-25V f=1.0MHz
Output Capacitance	C _{oss}	-	11	-		
Reverse Transfer Capacitance	C _{rss}	-	4	-		
Forward Transconductance	G _{fs}	-	430	-	mS	V _{DS} =-10V, I _D =-0.1A

- Notes: 1.Surface mounted on FR4 board; t ≤ 10 sec.
 2.Pulse width ≤ 300us, dutycycle ≤ 2%.
 3.Guaranteed by design, not subject to production testing.

Characteristics Curve

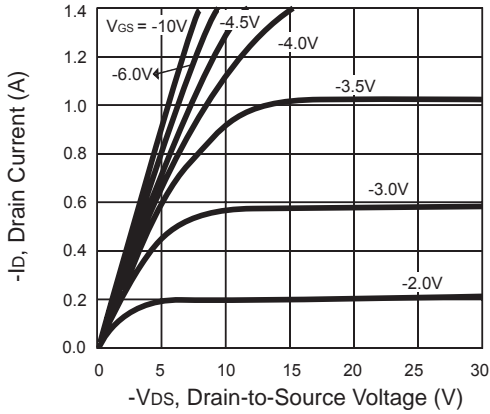


Figure 1. Output Characteristics

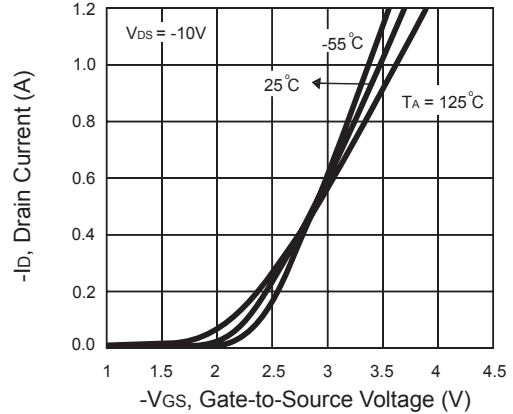


Figure 2. Transfer Characteristics

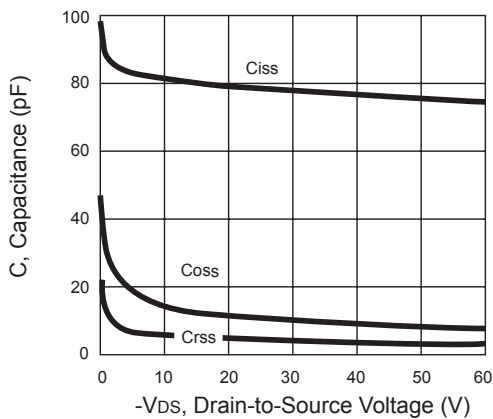


Figure 3. Capacitance

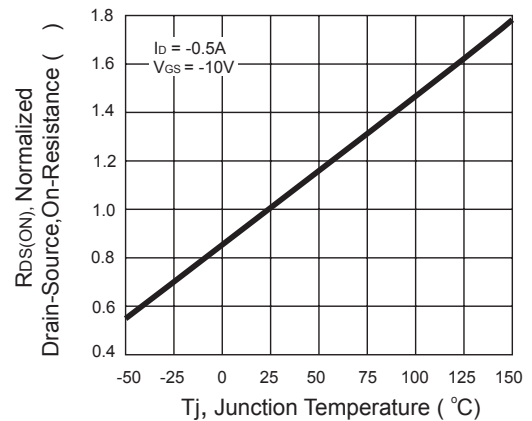


Figure 4. On-Resistance Variation with Temperature

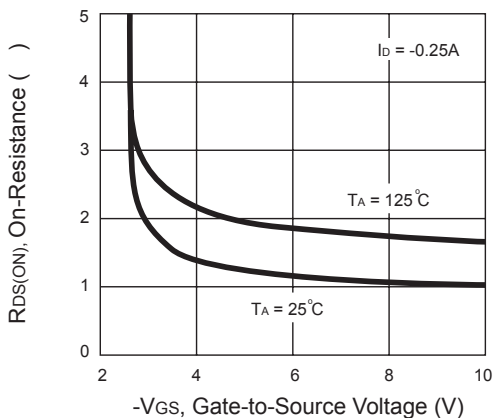


Figure 5. On-Resistance Variation with Gate-to-Source Voltage.

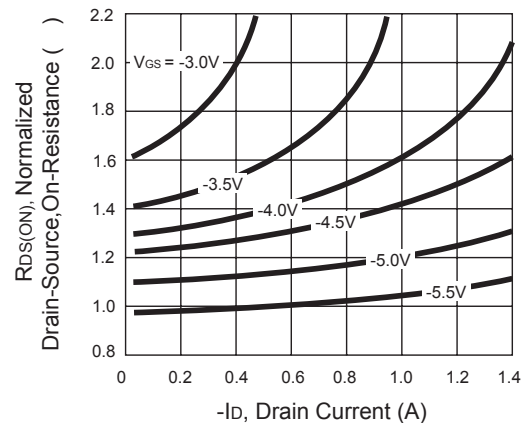


Figure 6. On-Resistance Variation with Drain Current and Gate Voltage.

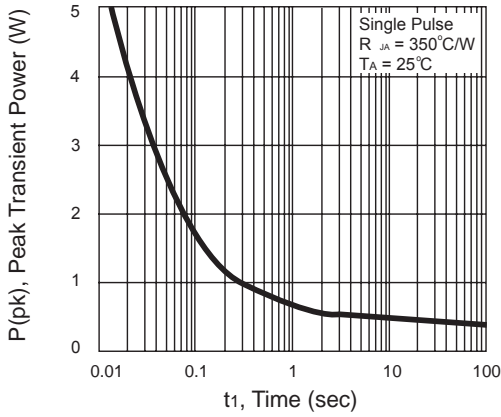


Figure 7. Single Pulse Maximum Power Dissipation

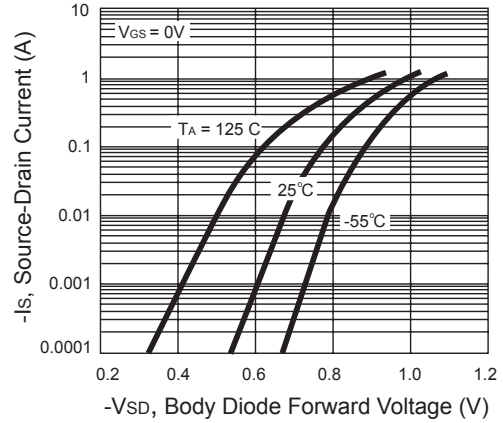


Figure 8. Body Diode Forward Voltage Variation with Source Current

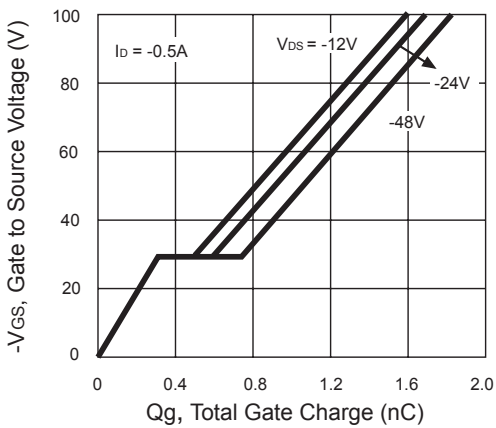


Figure 9. Gate Charge

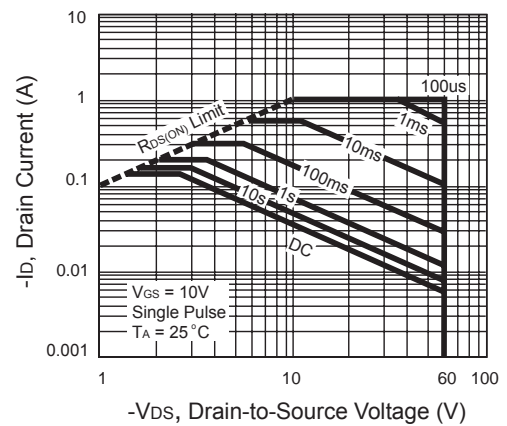


Figure 10. Maximum Safe Operating Area

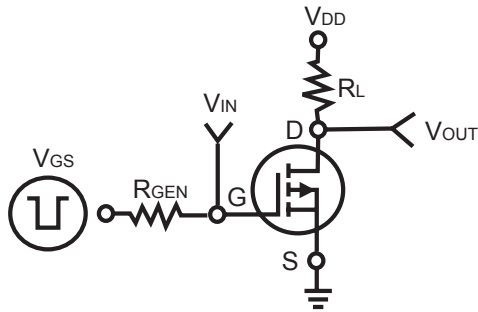


Figure 11. Switching Test Circuit

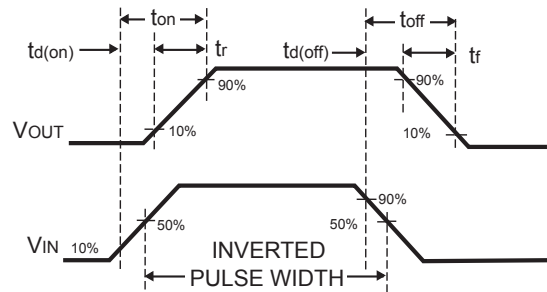


Figure 12. Switching Waveforms

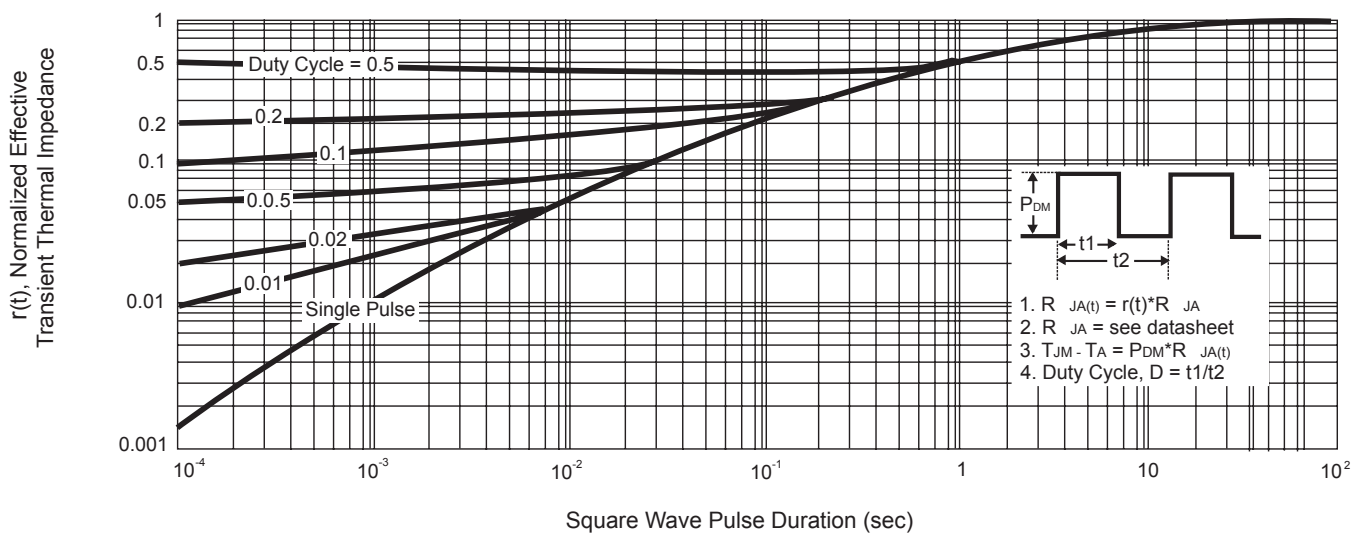


Figure 13. Normalized Thermal Transient Impedance Curve