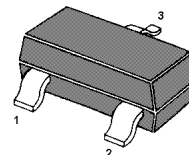
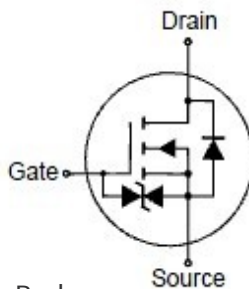


N-Channel Enhancement Mode Field Effect Transistor

Features

- $V_{DS}=25V$
- $I_D=0.22A$
- $R_{DS(on)}@V_{GS}=4.5V < 4.0\Omega$
- $R_{DS(on)}@V_{GS}=2.7V < 5.0\Omega$
- Trench Power MV MOSFET technology
- Voltage controlled small signal switch
- Fast Switching Speed
- Gate-Source Zener for ESD Ruggedness.>2V Human Body



1.Gate 2.Source 3.Drain
SOT-23 Plastic Package

Marking: 301

Absolute Maximum Ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	25	V
Gate-Source Voltage	V_{GSS}	± 8	V
Drain Current (Continuous)	I_D	220	mA
Drain Current (Pulse Width $\leq 10 \mu s$)	I_{DM}	500	mA
Total Power Dissipation	P_{tot}	350	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ C$

Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 250 \mu A$	BV_{DSS}	25	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 20 V$	I_{DSS}	-	1	μA
Gate Source Leakage Current at $V_{GS} = \pm 8 V$	I_{GSS}	-	± 10	μA
Gate Threshold Voltage at $V_{DS} = V_{GS}, I_D = 250 \mu A$	$V_{GS(th)}$	0.7	1.6	V
Static Drain Source On-Resistance at $V_{GS} = 4.5 V, I_D = 400 mA$ at $V_{GS} = 2.7 V, I_D = 200 mA$	$R_{DS(ON)}$	- -	4 5	Ω
Forward Transconductance at $V_{DS} = 5 V, I_D = 400 mA$	g_{fs}	50	-	mS
Input Capacitance at $V_{DS} = 10 V, f = 1 MHz$	C_{iss}	-	20	pF
Output Capacitance at $V_{DS} = 10 V, f = 1 MHz$	C_{oss}	-	15	pF
Reverse Transfer Capacitance at $V_{DS} = 10 V, f = 1 MHz$	C_{rss}	-	5	pF

TYPICAL PERFORMANCE CHARACTERISTICS (continued)

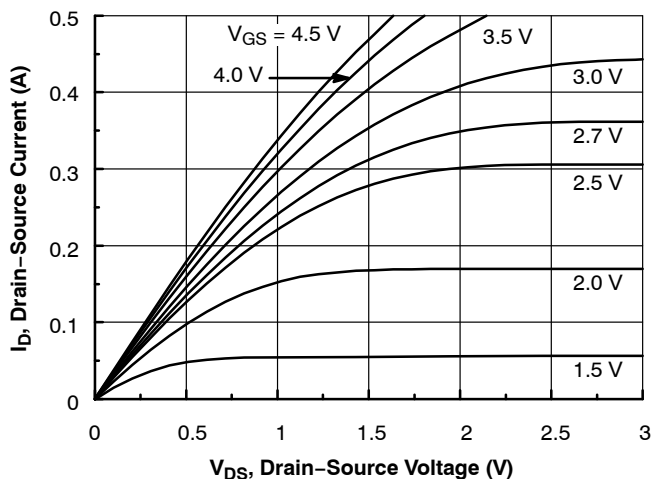


Figure 1. On-Region Characteristics

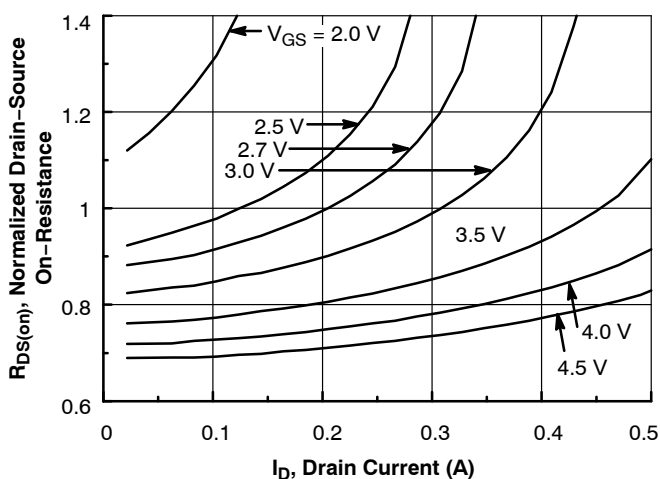


Figure 2. On-Resistance Variation with Drain Current and Gate Voltage

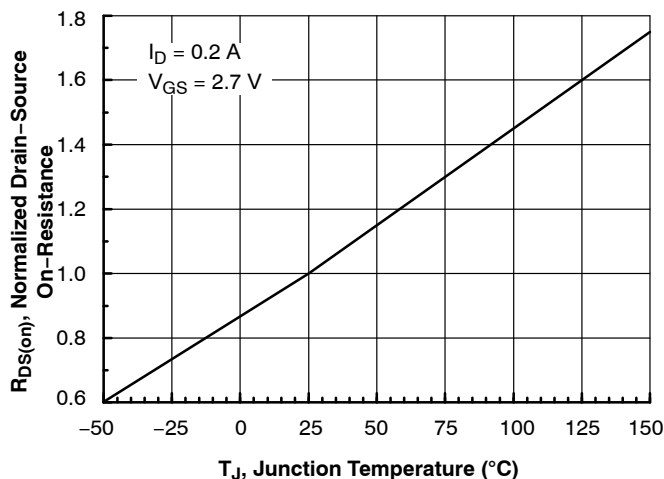


Figure 3. On-Resistance Variation with Temperature

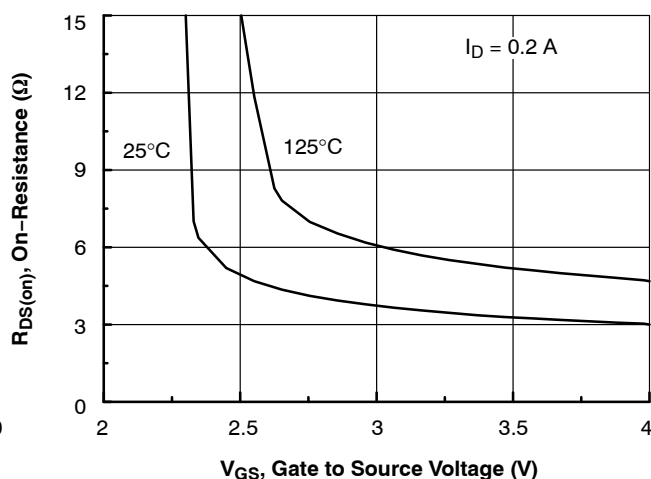


Figure 4. On Resistance Variation with Gate-To-Source Voltage

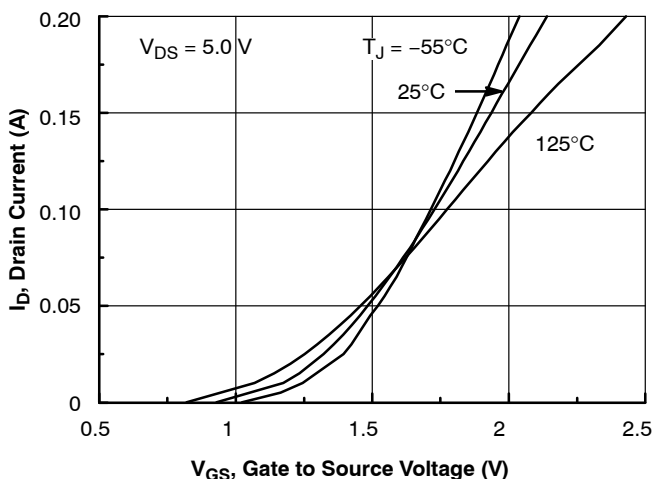


Figure 5. Transfer Characteristics

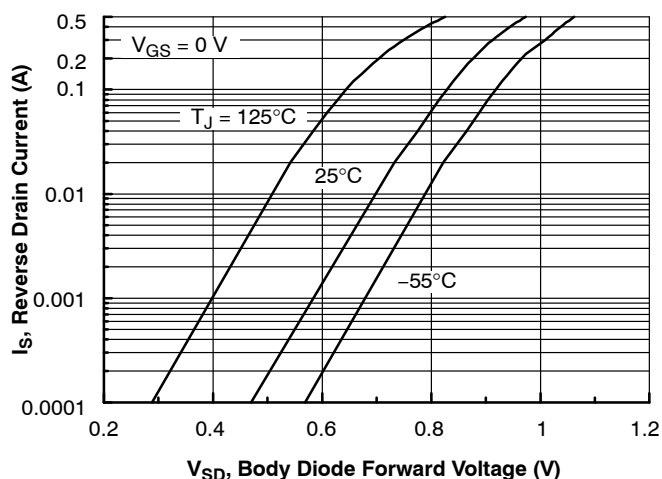


Figure 6. Body Diode Forward Voltage Variation with Source Current and Temperature

TYPICAL PERFORMANCE CHARACTERISTICS (continued)

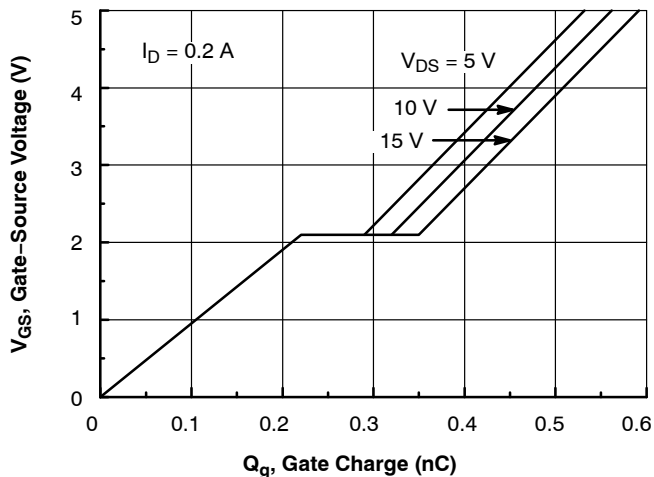


Figure 7. Gate Charge Characteristics

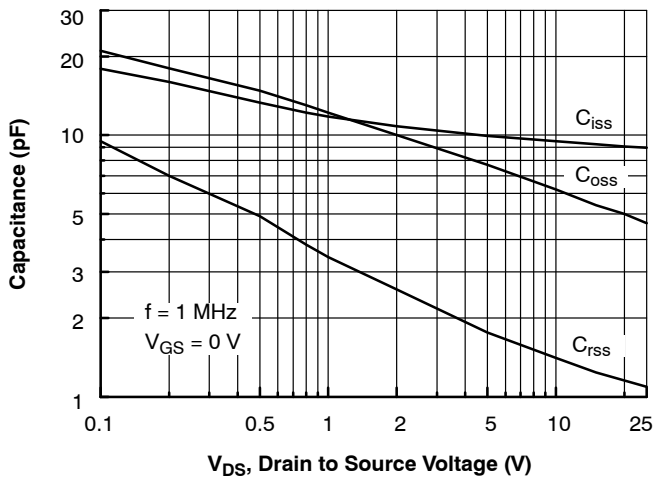


Figure 8. Capacitance Characteristics

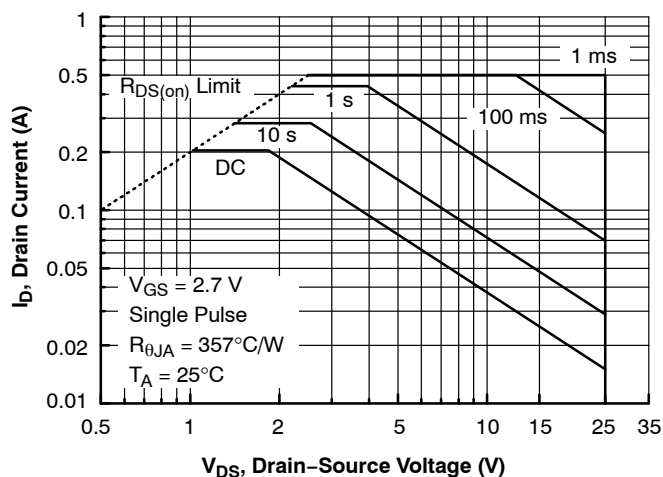


Figure 9. Maximum Safe Operating Area

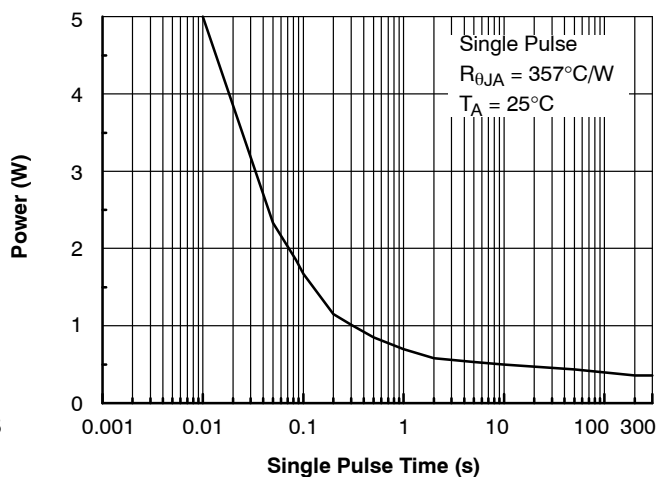


Figure 10. Single Pulse Maximum Power Dissipation

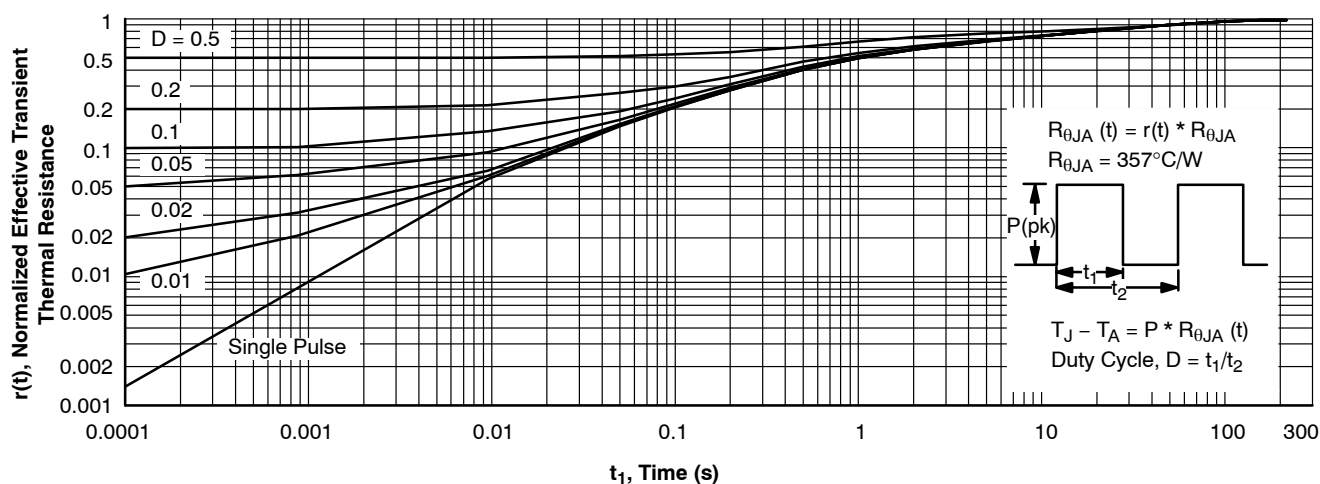


Figure 11. Transient Thermal Response Curve