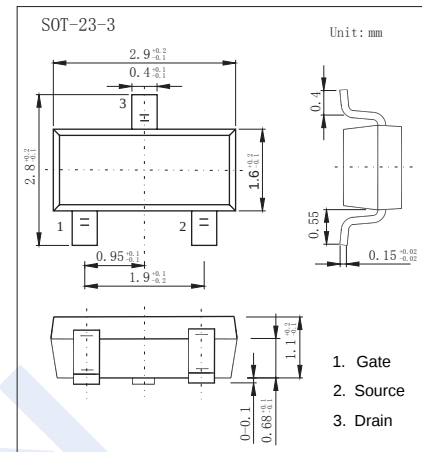
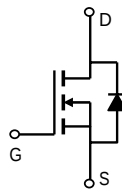


N-Channel Enhancement MOSFET

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■ Features

- $V_{DS} (V) = 60V$
- $I_D = 3.7A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 100m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 120m\Omega$ ($V_{GS} = 4.5V$)

■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	3.7	A
Pulsed Drain Current	I_{DM}	25	
Power Dissipation	P_D	1.4	W
Thermal Resistance.Junction- to-Ambient	R_{thJA}	55	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _D =60V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _D =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _D =V _{GS} , I _D =250 μA	1		2	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.9A			100	mΩ
		V _{GS} =4.5V, I _D =3.7A			120	
On State Drain Current	I _{D(on)}	V _{GS} =5V, V _D =10V	8			A
Forward Transconductance	g _{FS}	V _D =5V, I _D =3.7A	3	9		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _D =25V, f=1MHz			800	pF
Output Capacitance	C _{oss}				250	
Reverse Transfer Capacitance	C _{rss}				60	
Total Gate Charge	Q _g	V _{GS} =10V, V _D =40V, I _D =3.7A		9	12	nC
Gate Source Charge	Q _{gs}			2		
Gate Drain Charge	Q _{gd}			6		
Turn-On DelayTime	t _{d(on)}	I _D =1A, V _D =25V, R _{GEN} =6 Ω		15	20	ns
Turn-On Rise Time	t _r			18	20	
Turn-Off DelayTime	t _{d(off)}			40	50	
Turn-Off Fall Time	t _f			16	20	
Maximum Body-Diode Continuous Current	I _S				2.5	A
Diode Forward Voltage	V _{SD}	I _S =1.5A, V _{GS} =0V			1.2	V

■ Marking

Marking	3055
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■ Typical Characteristics

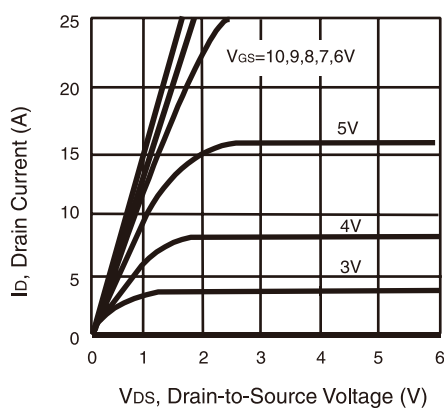


Figure 1. Output Characteristics

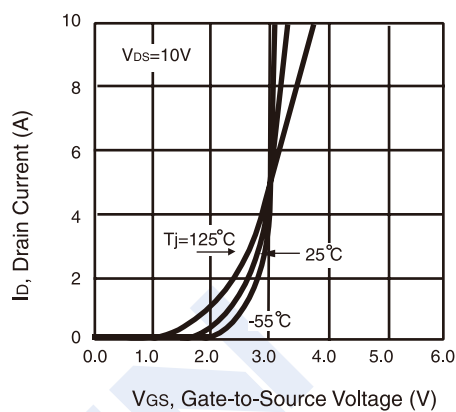


Figure 2. Transfer Characteristics

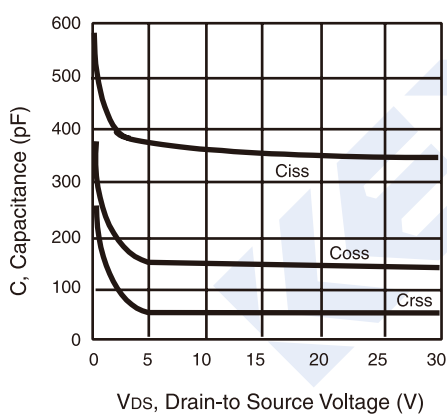


Figure 3. Capacitance

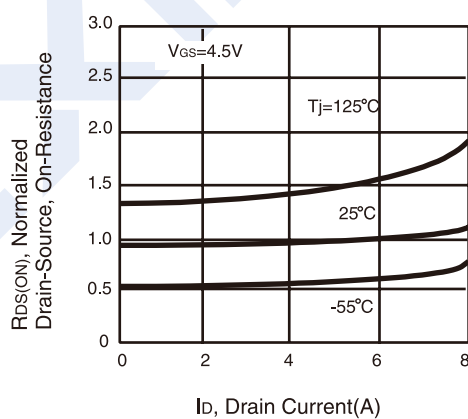


Figure 4. On-Resistance Variation with Drain Current and Temperature

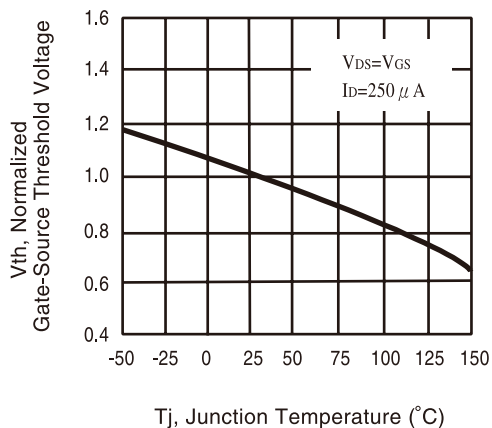


Figure 5. Gate Threshold Variation with Temperature

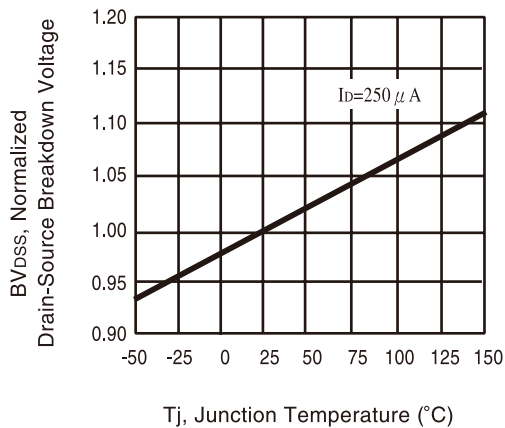


Figure 6. Breakdown Voltage Variation with Temperature

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■ Typical Characteristics

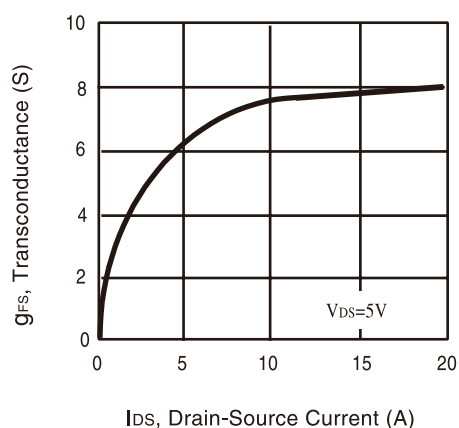


Figure 7. Transconductance Variation with Drain Current

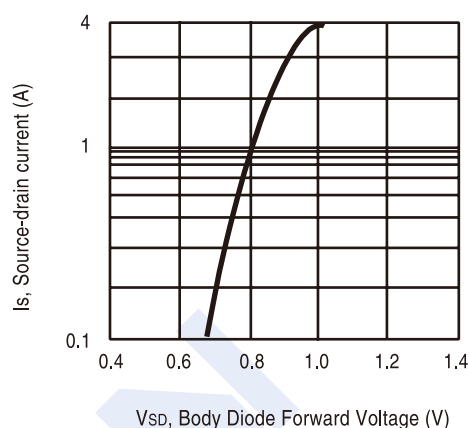


Figure 8. Body Diode Forward Voltage Variation with Source Current

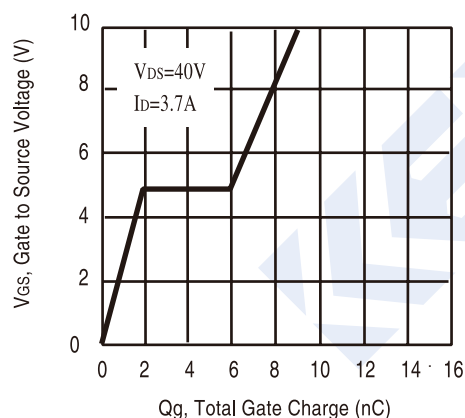


Figure 9. Gate Charge

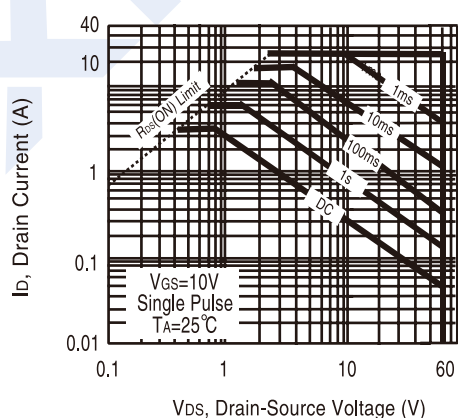


Figure 10. Maximum Safe Operating Area

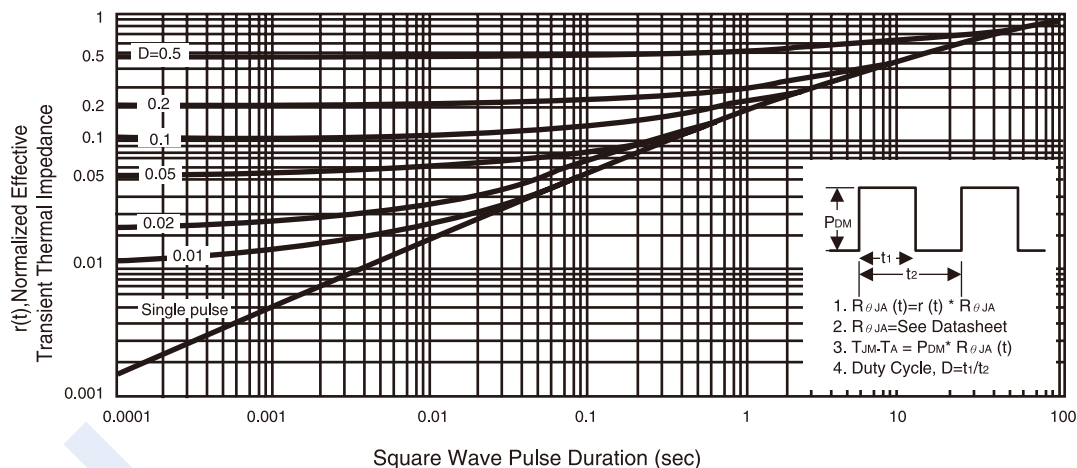


Figure 11. Normalized Thermal Transient Impedance Curve