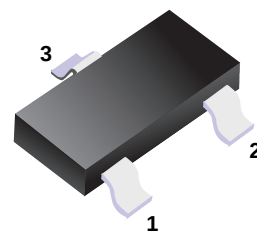
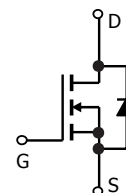


■ N-Channel Enhancement MOSFET



1. Gate
2. Source
3. Drain

■ Simplified outline(SOT23-3L)



■ MARKING

Marking	00A8C
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MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{DS}	Drain-Source voltage	20	V
V _{GS}	Gate-Source voltage	±10	V
I _D	Drain current	5	A
P _D	Power Dissipation	1.25	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250uA	20			V
Gate-Threshold Voltage	V _{th(GS)}	V _{DS} = V _{GS} , I _D =250 uA	0.5	0.70	1.0	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =± 10V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	uA
Drain-Source On-Resistance	r _{DS(ON)}	V _{GS} =2.5V, I _D =4.0A		27	35	mΩ
		V _{GS} =4.5V, I _D =5.0A		20	27	mΩ
Forward Trans conductance	g _{fs}	V _{DS} =5V, I _D =5.8A		25		S
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		515		pF
Output Capacitance	C _{oss}			90		
Reverse Transfer Capacitance	C _{rss}			72		
Switching Capacitance						
Turn-on Delay Time	t _{d(on)}	V _{DD} =10V, R _L =1.7 Ω, V _{GS} =10V R _{GEN} =3.0 Ω		3		nS
Turn-on Rise Time	t _r			7.5		nS
Turn-off Delay Time	t _{d(off)}			20		nS
Turn-off Fall Time	t _f			6		nS
Total Gate Charge	Q _g	V _{DS} =10V, I _D =5.8A, V _{GS} =10V,		12		nC
Gate-Source Charge	Q _{gs}			1		nC
Gate-Drain Charge	Q _{gd}			2		nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =1A		0.75	1.2	V
Diode Forward Current	I _S				2.0	A

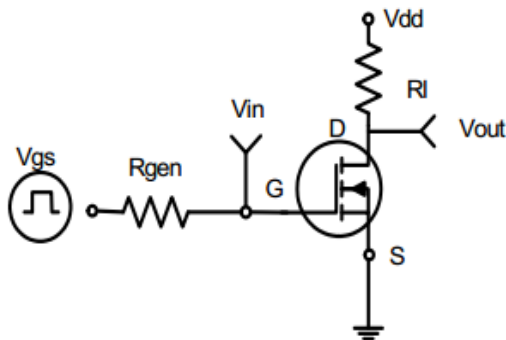


Figure 1: Switching Test Circuit

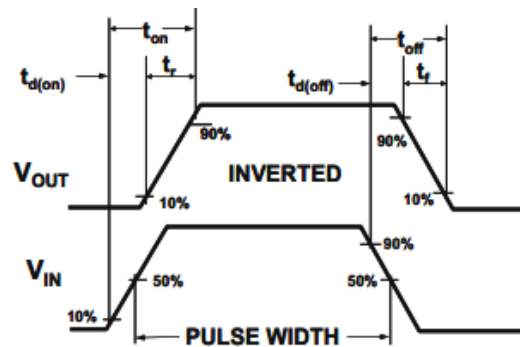


Figure 2: Switching Waveforms

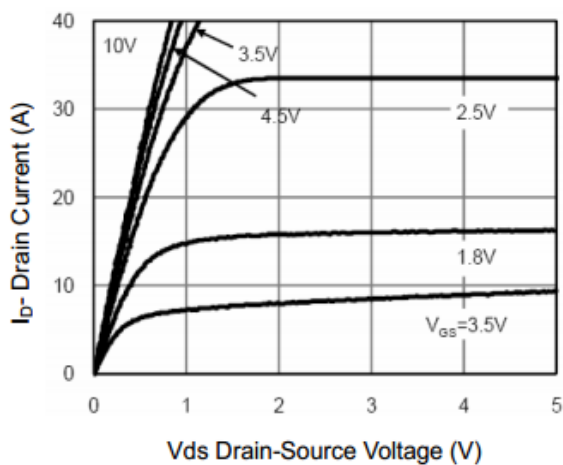


Figure 3 Output Characteristics

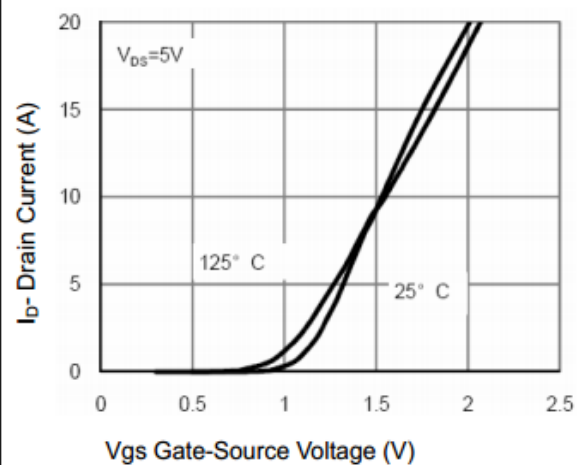


Figure 4 Transfer Characteristics

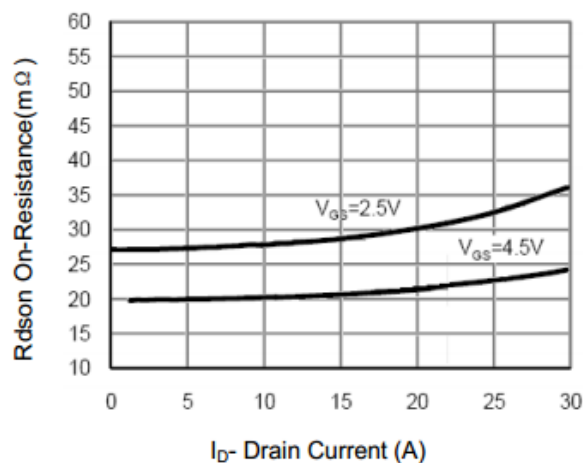


Figure 5 Drain-Source On-Resistance

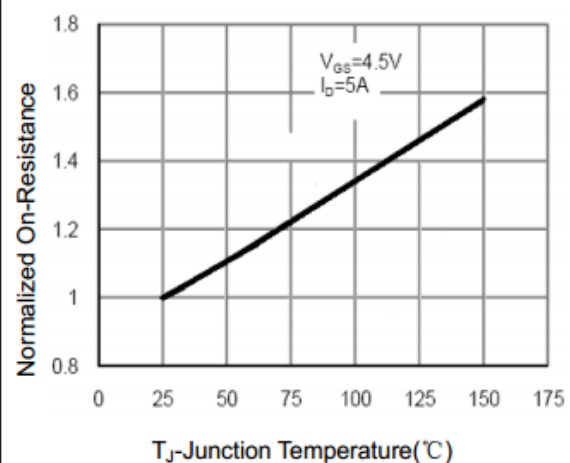
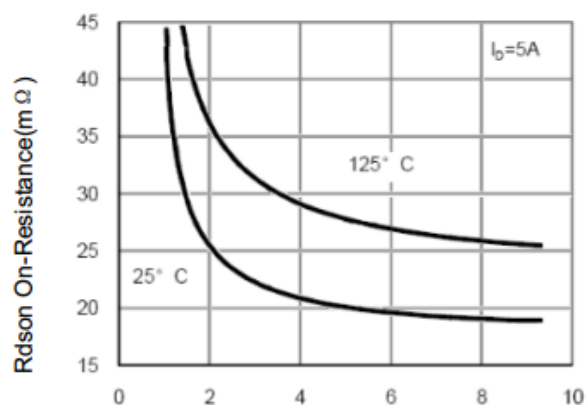
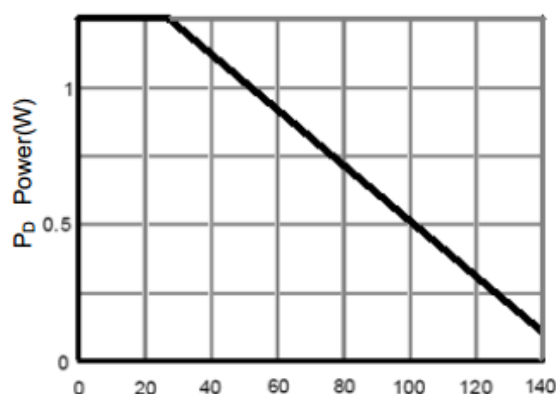


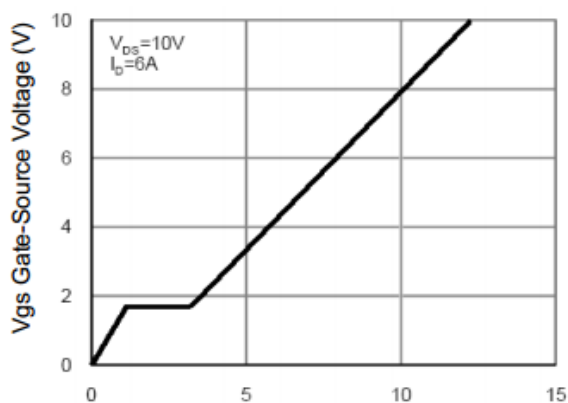
Figure 6 Drain-Source On-Resistance



Vgs Gate-Source Voltage (V)
Figure 7 Rdson vs Vgs



Tj Junction Temperature (°C)
Figure 8 Power Dissipation



Qg Gate Charge (nC)
Figure 9 Gate Charge

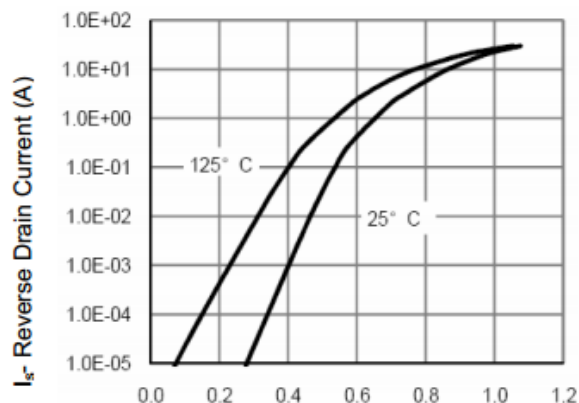
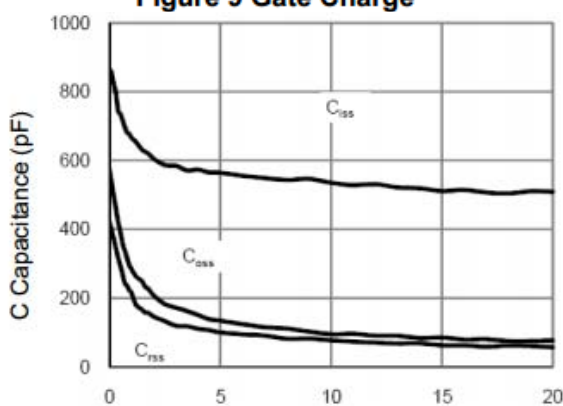
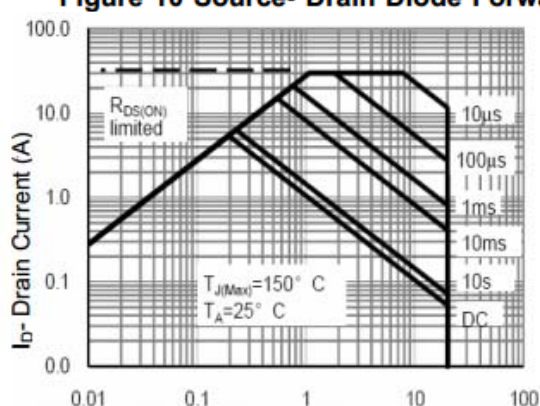


Figure 10 Source-Drain Diode Forward



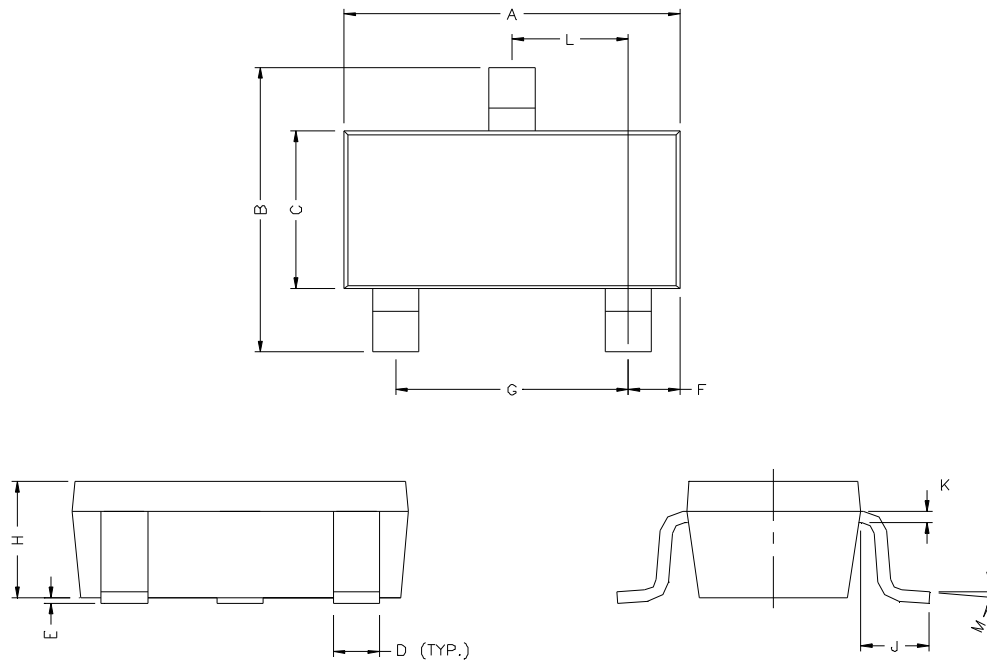
Vds Drain-Source Voltage (V)
Figure 11 Capacitance vs Vds



Vds Drain-Source Voltage (V)
Figure 12 Safe Operation Area

Package Outline

SOT23-3L



DIMENSIONS (mm are the original dimensions)

UNIT	A	B	C	D	E	F	G	H	K	J	L	M
mm	2.70 3.10	2.65 2.95	1.50 1.70	0.35 0.50	0 0.10	0.45 0.55	1.9	1.00 1.30	0.10 0.20	0.40 -	0.85 1.15	0° 10°

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT23-3L	Tape/Reel, 7" reel	3000	EIA-481-1