

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	V
Drain Current – Continuous	I_D	0.5	A
Peak Drain Current	I_{DM}	2	A
Power Dissipation	P_D	235	mW
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS}=0$ $I_D = 250\mu A$	20			V
Zero Gate Voltage Drain Current	$I_{DSS(1)}$	$V_{GS}=0$ $V_{DS}=16V$			1.0	μA
	$I_{DSS(2)}$	$T_J = 85$			30	μA
Gate-Body Leakage.	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 8$			± 10	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D = 250 \mu A$	0.5	0.65	1.0	V
Static Drain-Source On-Resistance ^a	$R_{DS(on)(1)}$	$V_{GS}=4.5V$ $I_D=0.5A$		0.25	0.4	Ω
	$R_{DS(on)(2)}$	$V_{GS}=2.5V$ $I_D=0.2A$		0.35	0.65	Ω
	$R_{DS(on)(3)}$	$V_{GS}=1.8V$ $I_D=0.1A$		0.4	0.8	Ω
	$R_{DS(on)(4)}$	$V_{GS}=1.5V$ $I_D=0.05A$		0.5		Ω
	$R_{DS(on)(5)}$	$V_{GS}=1.2V$ $I_D=0.02A$		1.0		Ω
Diode Forward Voltage	V_{SD}	$I_{SD} = 0.5 A$ $V_{GS} = 0 V$		0.7	1.3	V
Input Capacitance	C_{iss}	$V_{DS}=10V$ $V_{GS}=0V$ $f=1.0MHz$		105		pF
Output Capacitance	C_{oss}			65		
Reverse Transfer Capacitance	C_{rss}			20		
Total Gate Charge	Q_g	$V_{GS}=4.5V,$ $V_{DS}=10V,$ $I_D=0.4A$		0.85		nC
Gate Source Charge	Q_{gs}			0.1		
Gate Drain Charge	Q_{gd}			0.25		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=4.5V$ $V_{DS}=10V$ $R_L=25\Omega$ $R_{GEN}=3\Omega$		2		ns
Turn-On Rise Time	t_r			4		
Turn-Off Delay Time	$t_{d(off)}$			18		
Turn-Off Fall Time	t_f			8		

/ Electrical Characteristic Curve

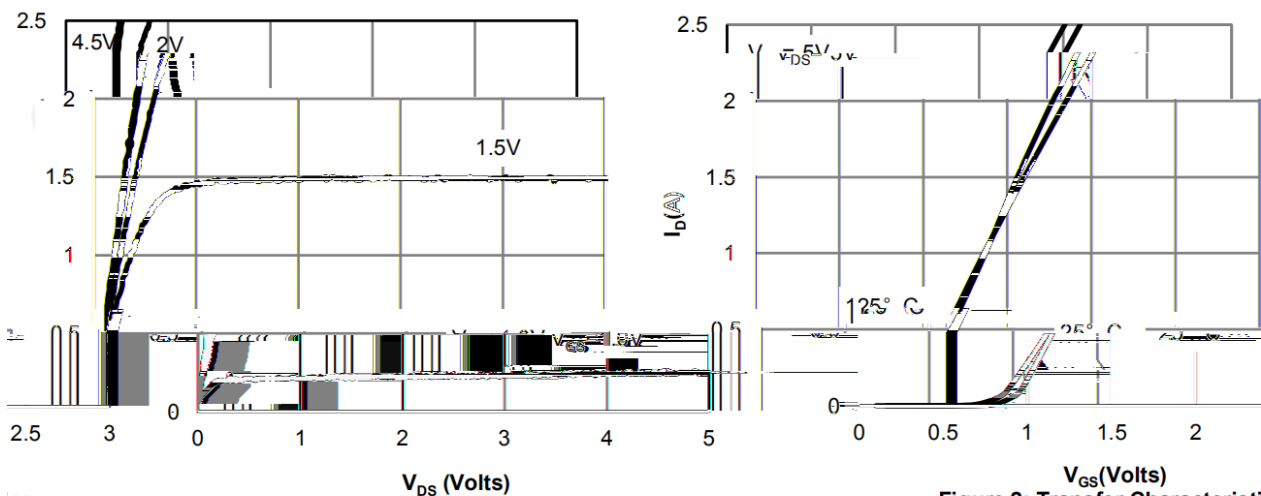


Figure 1: Drain Current vs. Drain-Source Voltage

Figure 2: Transfer Characteristics

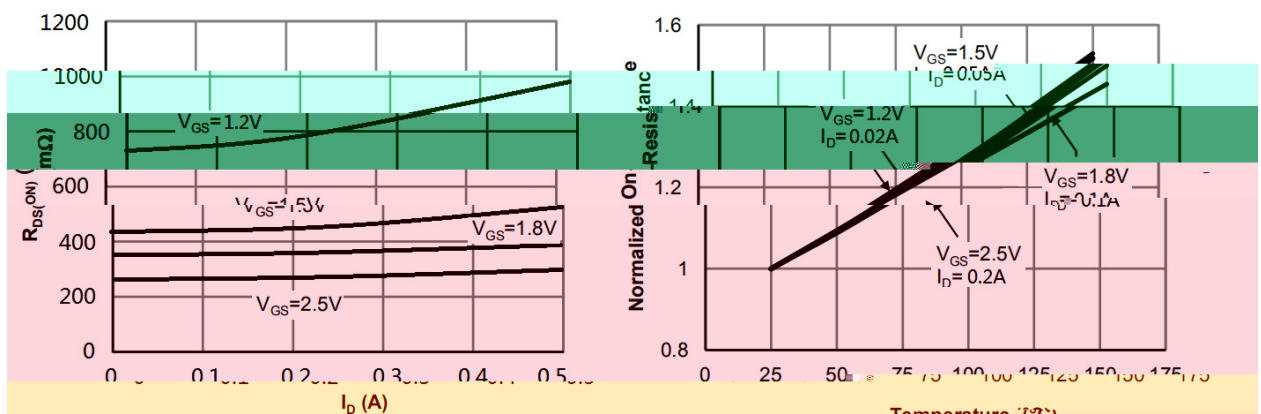


Figure 3: On-Resistance vs. Drain Current

Figure 4: Normalized On-Resistance vs. Temperature

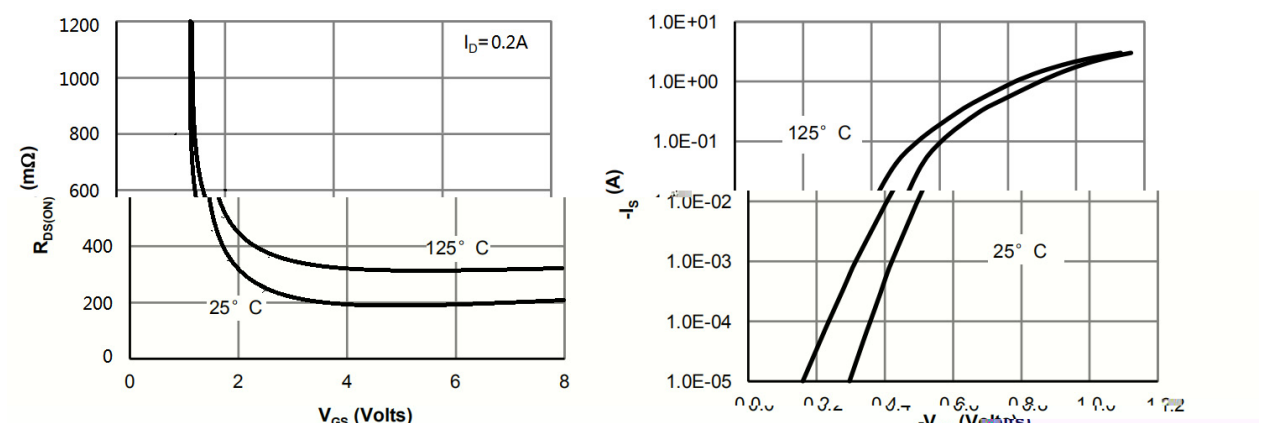
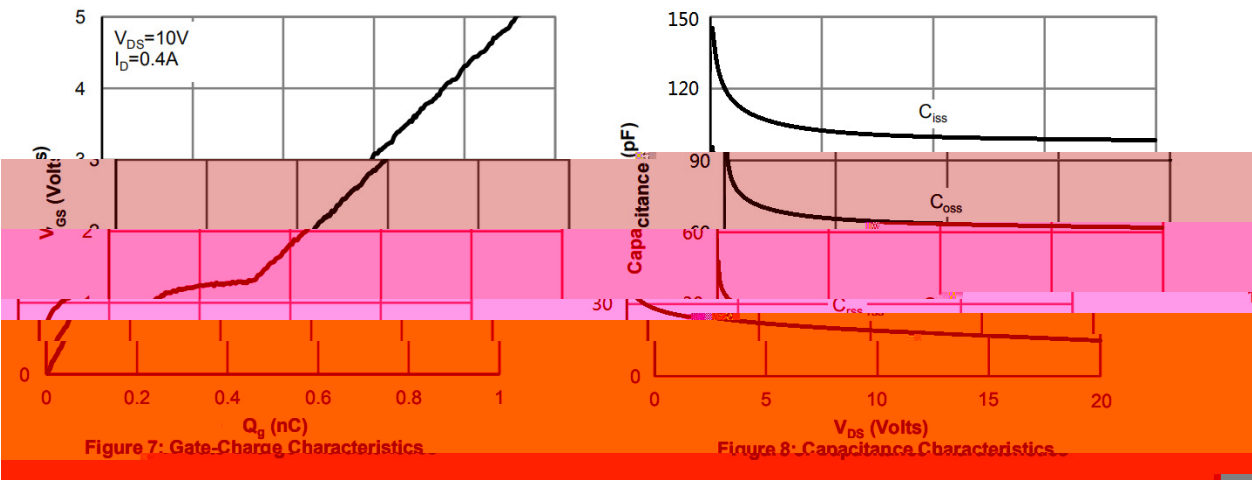


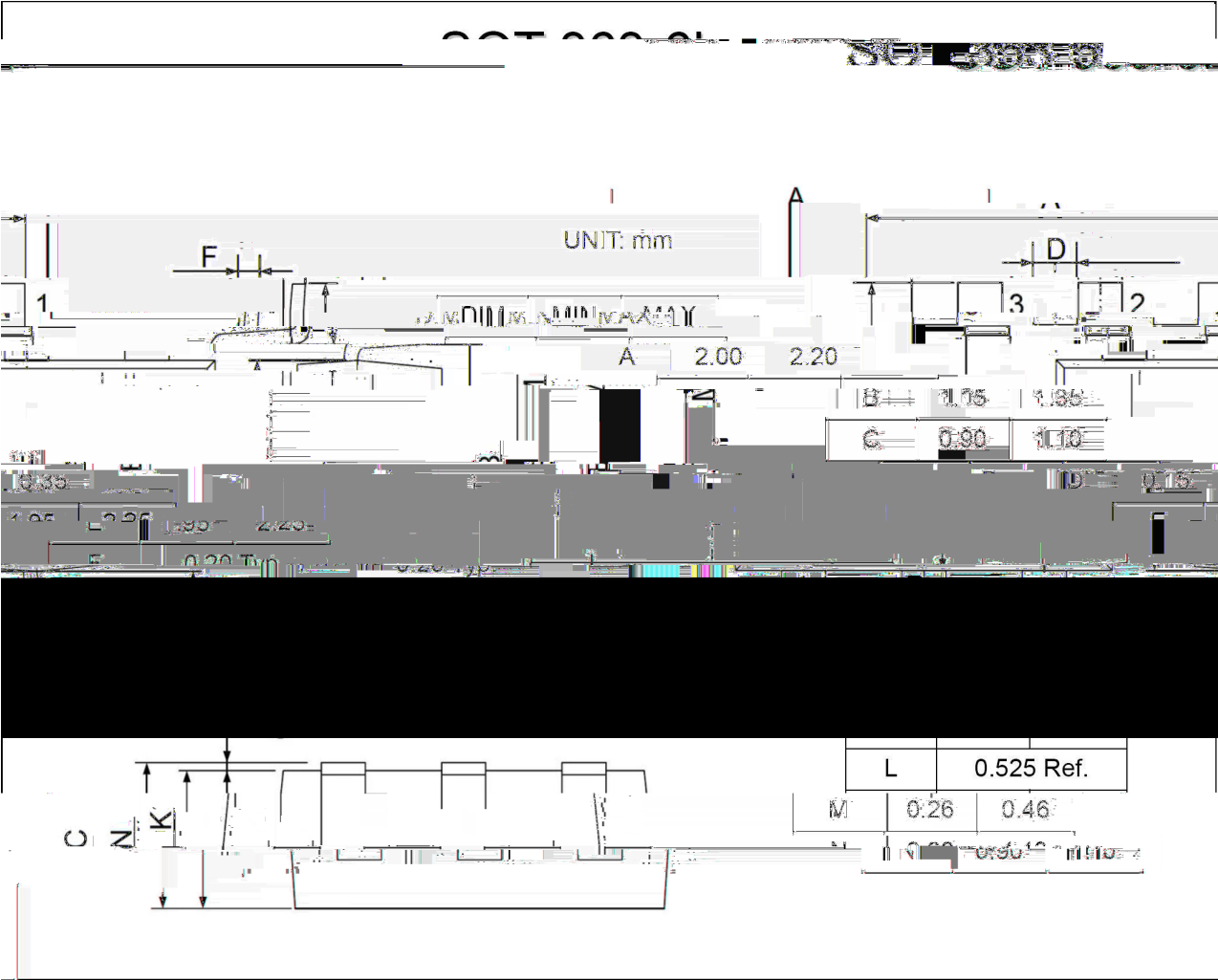
Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body Diode Characteristics

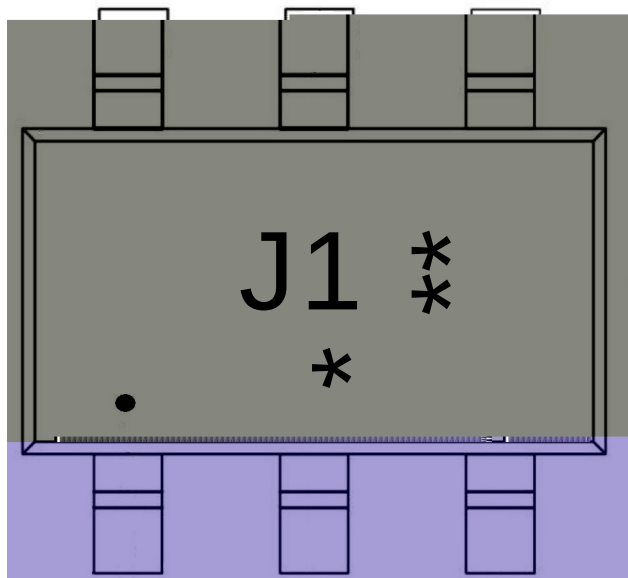
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



● “ 1 ”

J1

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Note:

● “ 1 ” Pin

J1: Product Type Code

***: Lot No. Code, code change with Lot No

