Parameter	Symbol	Rating		Unit
		N-channe	P-channell	
Drain-Source Voltage	V_{DSS}	30	-30	V
Gate-Source Voltage	V_{GSS}	±12		V
Continuous Drain Current	I_D (T_C=25)	5.5	-4.0	A
Pulsed Drain Current	I_{DM}	35	-25	A
Power Dissipation	P_D (T_C=25)	1.3	1.3	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150		
Maximum Junction-to-Ambient	$R_{\theta JA}$	140		/W
Maximum Junction-to-Lead	$R_{\theta JL}$	75		/W

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	30	32.6		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V	V_{GS}=0V			1.0	μA
Gate-Body leakage current	I_{GSS}	V_{GS}=±12V	V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	0.5	0.9	1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=4A		21.5	25	mΩ
		V_{GS}=4.5V	I_D=4A		23	35	mΩ
		V_{GS}=2.5V	I_D=1A		30	50	mΩ
Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=1A		0.74	1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1.0MHz	V_{GS}=0V		690		pF
Output Capacitance	C_{oss}				200		pF
Reverse Transfer Capacitance	C_{rss}				130		pF
Gate resistance	R_g	V_{DS}=0V f=1.0MHz	V_{GS}=0V		3.5		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V I_D=3.5A	V_{DS}=15V		4.1		nC
Total Gate Charge	$Q_{g(4.5V)}$				2.2		nC
Gate-Source Charge	Q_{gs}				0.6		nC
Gate-Drain Charge	Q_{gd}				1.1		nC
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=15V R_L=4.2Ω	V_{GS}=10V R_{GEN}=3Ω		4.6		ns
Turn-On Rise Time	t_r				1.4		ns
Turn-Off Delay Time	$t_{d(off)}$				18.7		ns
Turn-Off Fall Time	t_f				15.8		ns

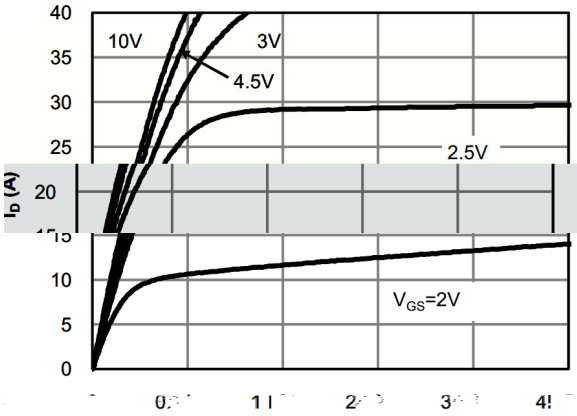

Fig 1: On-Region Characteristics

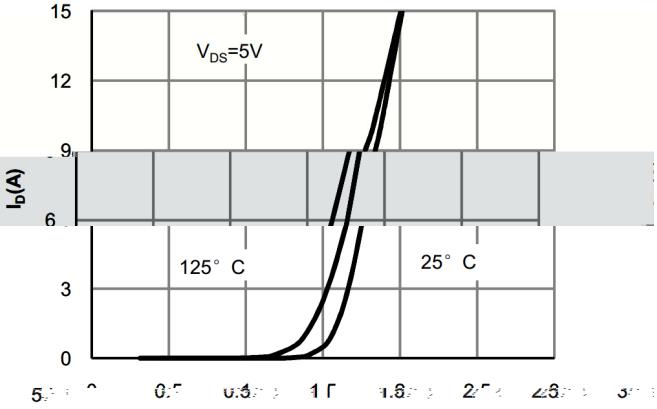

Figure 2: Transfer Characteristics

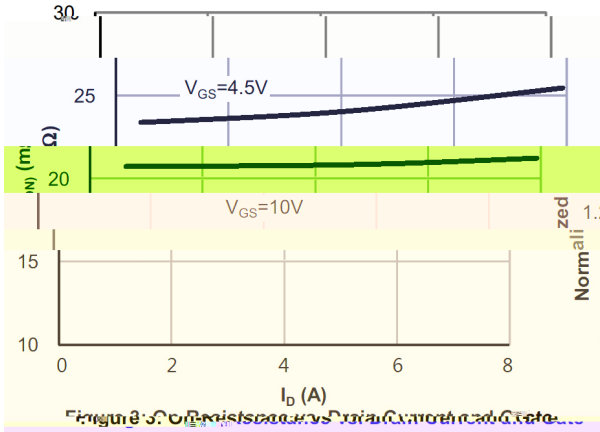

Figure 3: On-Resistance vs. Drain Current and Gate Voltage

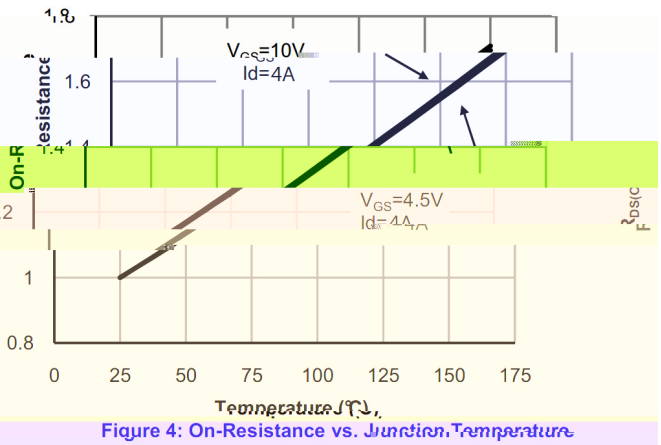

Figure 4: On-Resistance vs. Junction Temperature

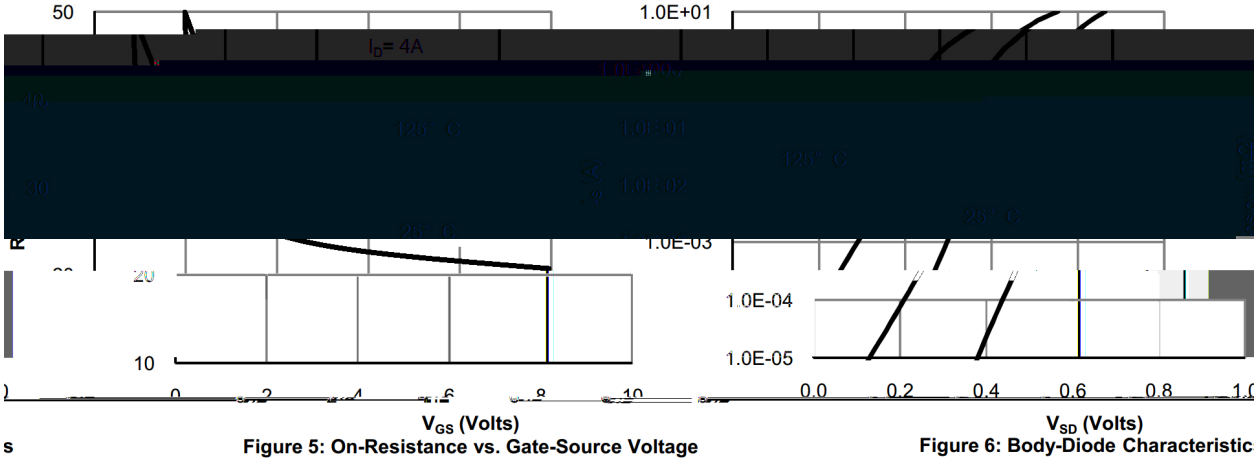

Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristic

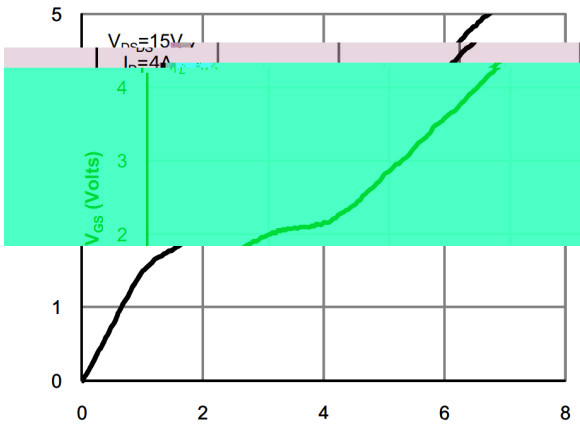

Figure 7: Gate-Charge Characteristics

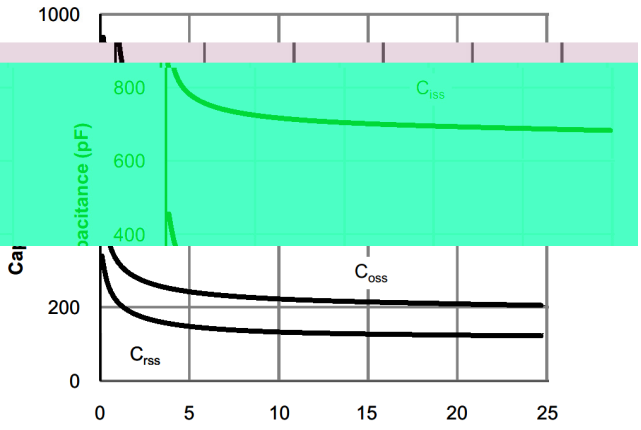

Figure 8: Capacitance Characteristics

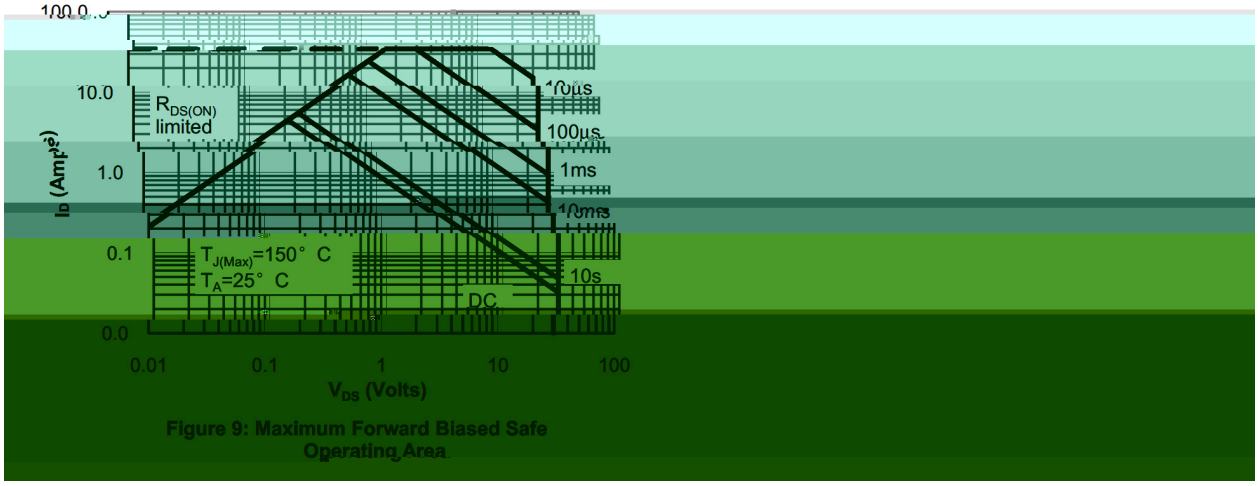

Figure 9: Maximum Forward Biased Safe Operating Area

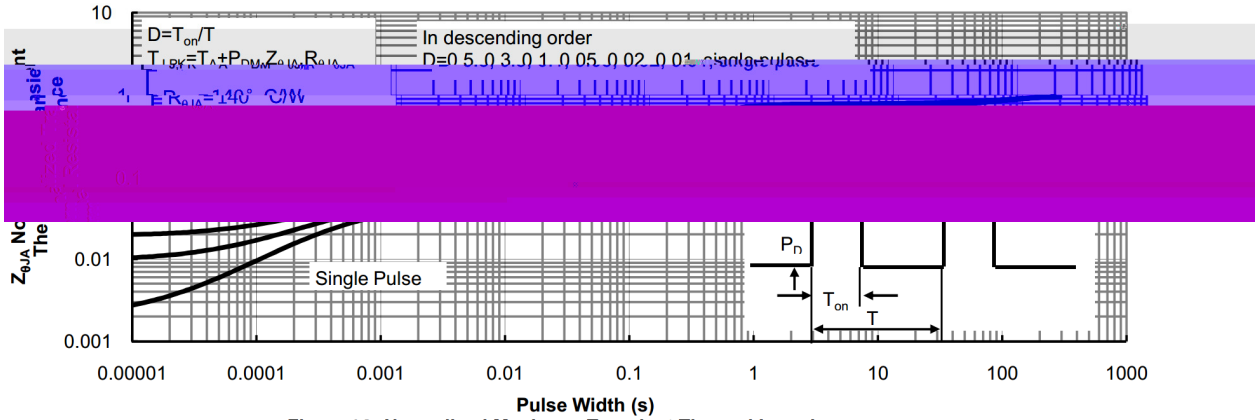

Figure 10: Normalized Maximum Transient Thermal Impedance

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=-250μA	-30	-32		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V V_{GS}=0V			-1.0	μA
Gate-Body leakage current	I_{GSS}	V_{GS}=±12V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-0.5	-0.9	-1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V I_D=-4A		46	55	mΩ
		V_{GS}=-4.5V I_D=-4A		53	65	mΩ
		V_{GS}=-2.5V I_D=-1A		70	120	mΩ
Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=-1A		-0.76	-1.2	V
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		900		pF
Output Capacitance	C_{oss}			240		pF
Reverse Transfer Capacitance	C_{rss}			190		pF
Gate resistance	R_g	V_{DS}=0V V_{GS}=0V f=1.0MHz		4.5		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=-10V V_{DS}=-15V I_D=-2.7A		4.4		nC
Total Gate Charge	$Q_{g(4.5V)}$			2.3		nC
Gate-Source Charge	Q_{gs}			0.75		nC
Gate-Drain Charge	Q_{gd}			1.2		nC
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-15V V_{GS}=-10V R_L=5.55Ω R_{GEN}=3Ω		7.8		ns
Turn-On Rise266042 f332.1(i1-2.2()7.7(72 231(t)]TJ7.0172 0 0 7 02 226.22T)36.7003 Tm0 Tc0 Twr(L)Tj10.4958 0 0						

P-?è Ô ? d • Ž ¢ / P-CHANNEL Electrical Characteristic Curve

Ø ¤ =) ¢ / Package Dimensions

, M y ƒ / Marking Instructions

B01Q
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B01: º Z W A

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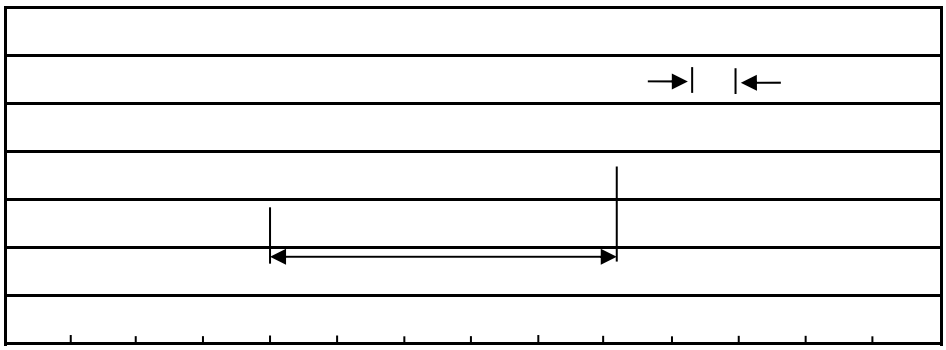
****: ÿ D Z W A k š ÿ D Z J

Note:

B01 y	Product Type Code
Q:	Automobile halogen-free product Code
****:	Lot No.Code,code change with Lot No

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6



ª ¢ y Note:

1o• Ä ½ “ † 150 ½200 - k ž • 60 ½120sec; 1.Preheating:150~200 - , Time:60~120sec.

2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec; 2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3o•D N ò i Ò 0 , † 2 ½10 - /sec. 3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 - ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit Æmm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box×	Outer Box1ç
SOT23-5/6	3,000	10	30,000	4	120,000	7 s ×8	210×205×205	445×435×230

„ Ð y ƒ / Notices