SOT-23 ṂṂ Ŀ P ǰ ʄ ᾧ Ẓ ˥

S- CHANNEL MOSFET in a SOT-23 Plastic Package.

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Ultra Low on-resistance. fast switching.Low on voltage, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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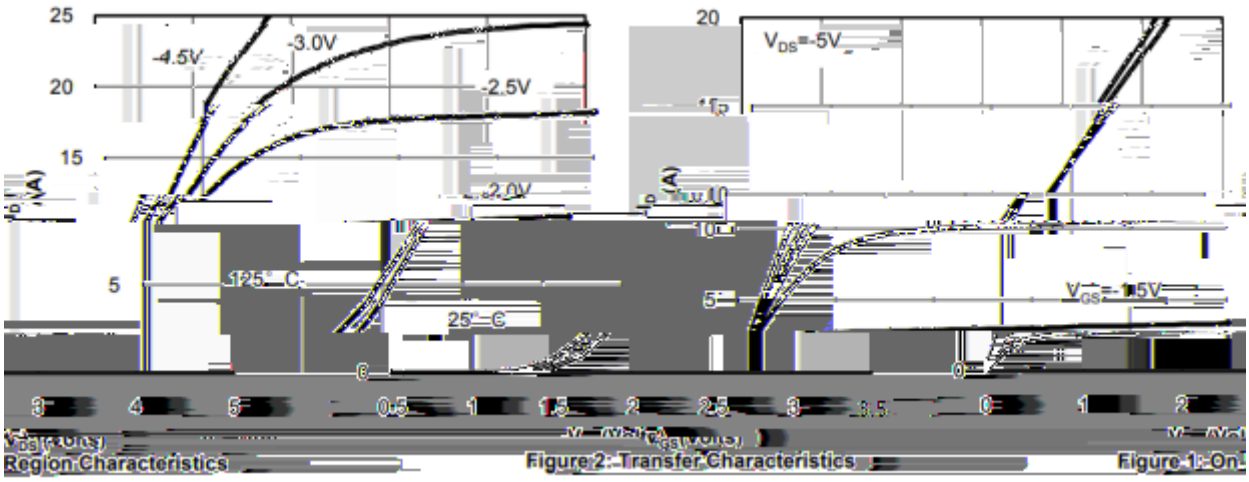
PWM application & Load switch, Meet the stringent requirements of automotive applications.

v Ώ Parameter		ϟ N Symbol	Ώ Ö Rating	D Ϧ Unit
Drain–Source Voltage		V_{DSS}	-60	V
Gate–Body Leakage Voltage		V_{GSS}	±20	V
Drain Current - Continuous		I_D	-5	A
Pulsed Drain Current		I_{DM}	-18	A
Power Dissipation (Surface Mounted on FR4 Board, t ≤ 10 sec.)		P_D	1.5	W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 150	
Maximum Junction-to-Ambient	t ≤ 10s	$R_{\theta JA}$	118.6	/W
Maximum Junction-to-Ambient	Steady-State		161.6	/W
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	83.3	/W

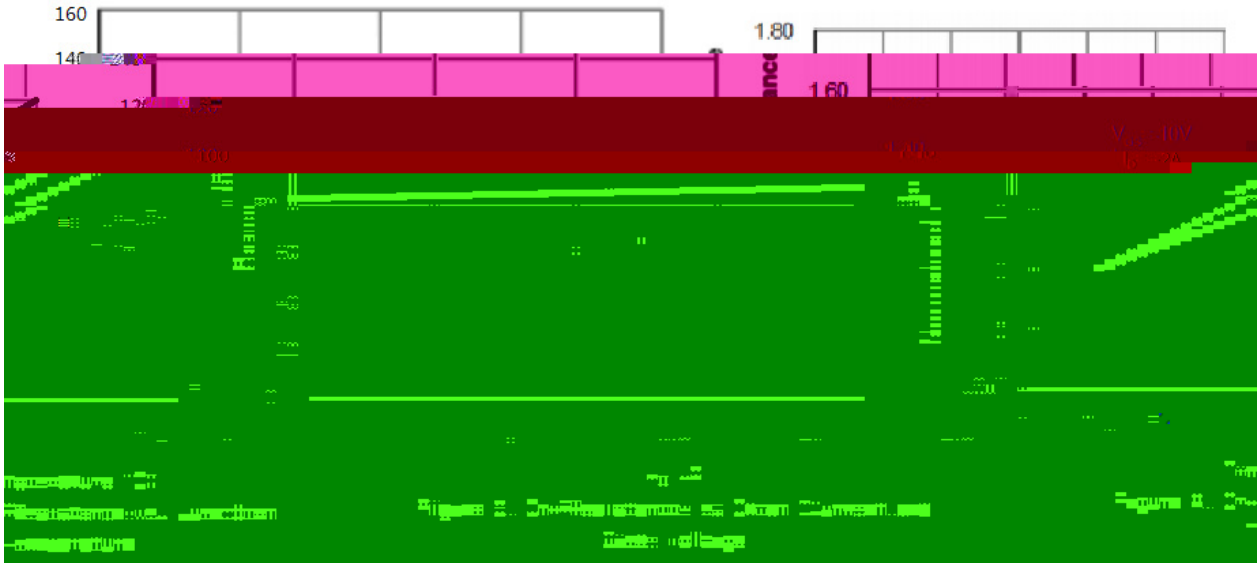
v Ώ Parameter	ϟ N Symbol	⊥ ⁝ ϟ Ţ Test Conditions	ώ ṇ Ö Min	Ɛ ʒ Ö Typ	ώ ᶻ Ö Max	D Ϧ Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V I_D=-250μA	-60	-63		V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-1	-1.5	-2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	V_{GS}=-10V I_D=-2A		84	100	mΩ
		V_{GS}=-4.5V I_D=-1A		103	125	mΩ
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V V_{GS}=0V			-1.0	μA
Gate–Body Leakage.	I_{GSS}	V_{GS}=-20V			-100	nA
		V_{GS}=20V			100	nA
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=-1A T_J=25			-1.2	V
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		885		pF
Output Capacitance	C_{oss}			90		
Reverse Transfer Capacitance	C_{rss}			64		
Total Gate Charge	Q_g(-10V)	V_{DS}=-30V V_{GS}=-10.0V I_D=-5A		25		nC
Total Gate Charge	Q_g(-4.5V)			9.6		
Gate-to-Source Charge	Q_{gs}			3		
Gate-to-Drain Charge	Q_{gd}			7		
Turn–On Delay Time	$t_{d(on)}$	V_{DD}=-30V V_{GS}=-10V R_L=7.5Ω R_G=3Ω		8		ns
Turn–On Rise Time	t_r			4		
Turn–Off Delay Time	$t_{d(off)}$			32		
Turn–Off Fall Time	t_f			7		

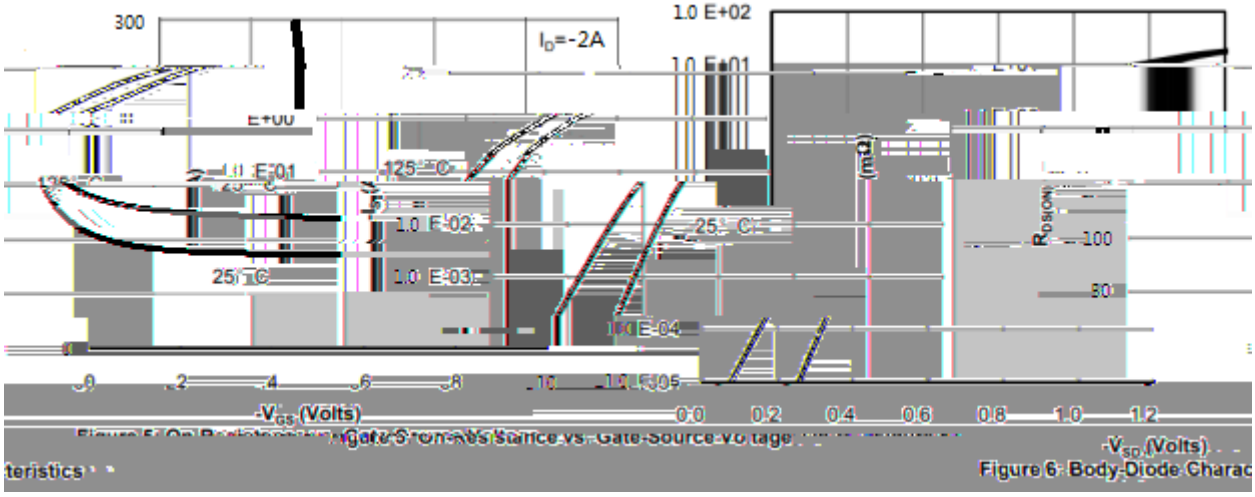


Region Characteristics

Figure 2: Transfer Characteristics

Figure 1: On





Gate-Source Voltage

Figure 6: Body-Diode Charac

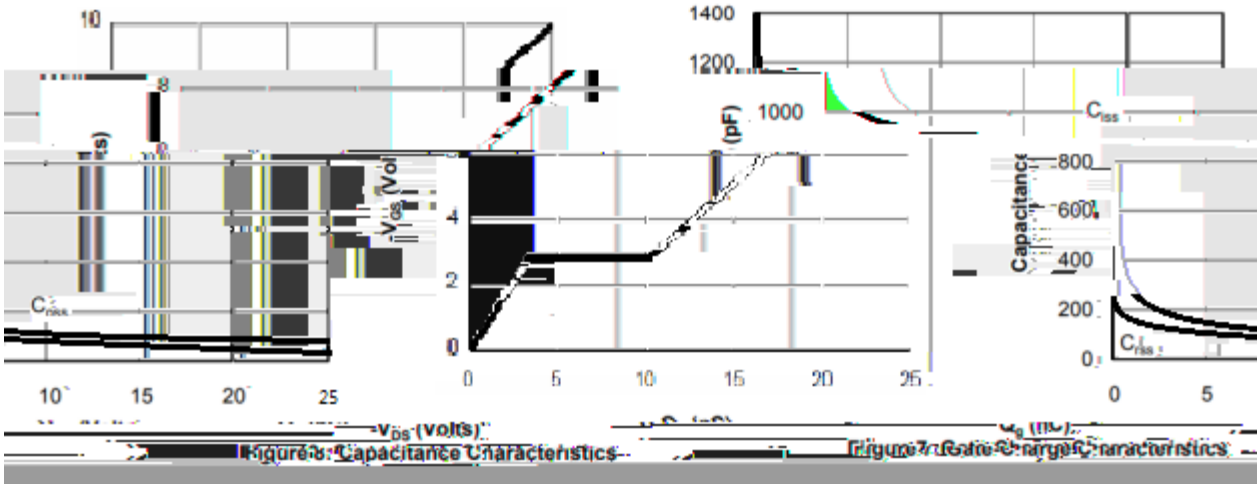


Figure 6. Capacitance Characteristics

Figure 7. Gate Charge Characteristics

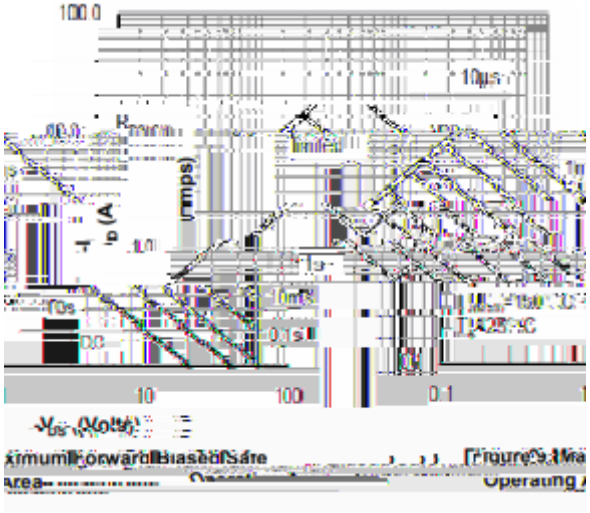


Figure 8. Maximum Forward Biased Safe Operating Area

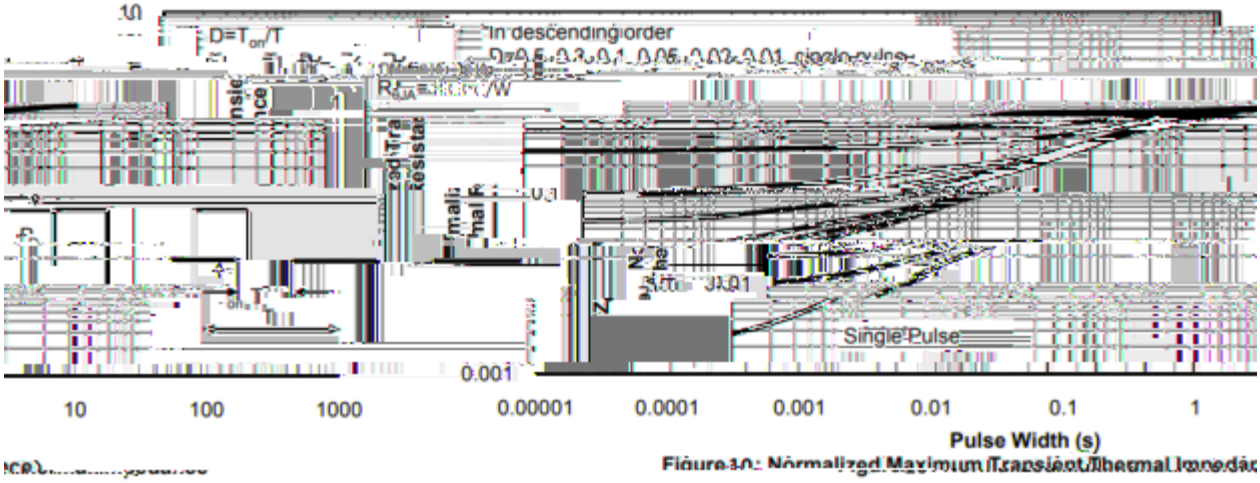
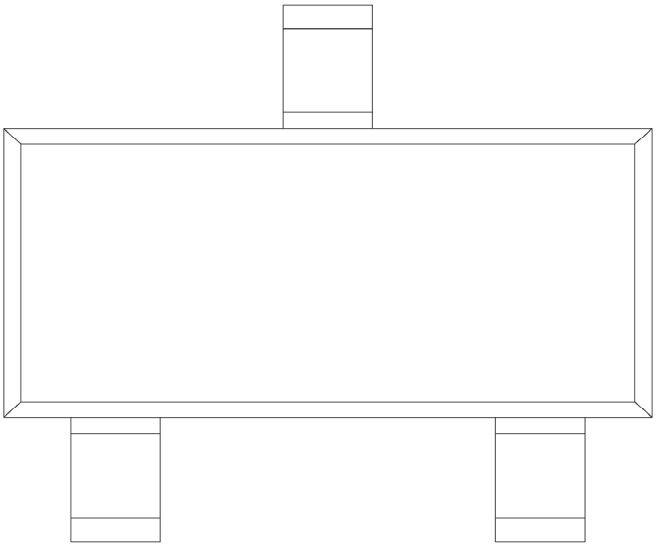


Figure 10. Normalized Maximum Transient Thermal Impedance



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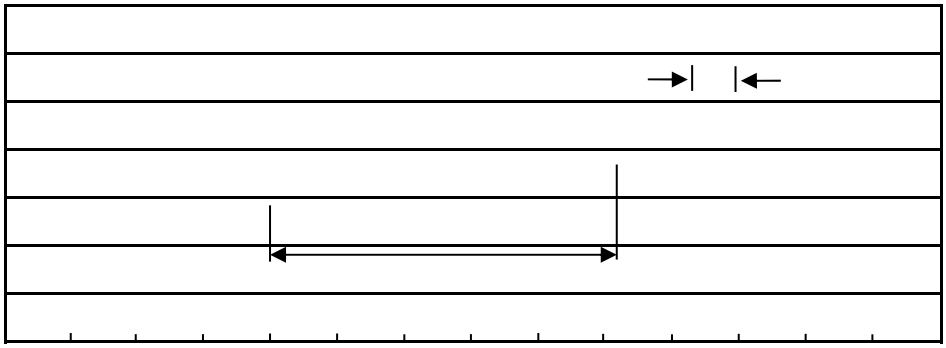
5P6 χ ѭ ʒ ᴺ Ɱ

Note:

Q: Automobile halogen-free product Code

5P6: Product Type



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1 ǂ ♬ □ ỷ 150 Ḱ 200 ɬ ı `H ڑ 60 Ḱ 120sec;

2 Š Ö □ ỷ 255 ° 5 ɬ ı `H ڑ ˙Y ⺈ ⺾ 5 ° 0.5sec;

3 ì ˙ ⺈ ˛ ɔ ھ ỷ ⺾ 2 Ḱ 10 ɬ /sec.

Note:

1.Preheating:150~200 ɬ , Time:60~120sec.

2.Peak Temp.:255 ° 5 ɬ , Duration:5 ° 0.5sec.

3.Cooling Speed: 2~10 ɬ /sec.

□ ỷ χ 260 ° 5 ɬ `H ڑ χ 10 ° 1 sec. Temp.:260±5 Time:10±1 sec

ɔ ` γ ⊾ / REEL

Package Type	Units					Dimension (unit mm³)		
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205