SOT-23 P MOS

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

V_{DS}=-20V I_D=-5.3A

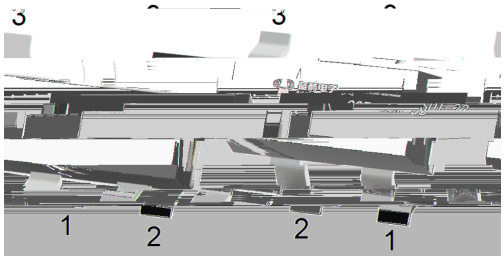
$R_{DS(on)}$@-4.5V ≤ 33.2mΩ, (Typ. 25.5mΩ)

$R_{DS(on)}$@-2.5V ≤ 46.8mΩ, (Typ. 35.2mΩ)

ESD Protected

HF Product.

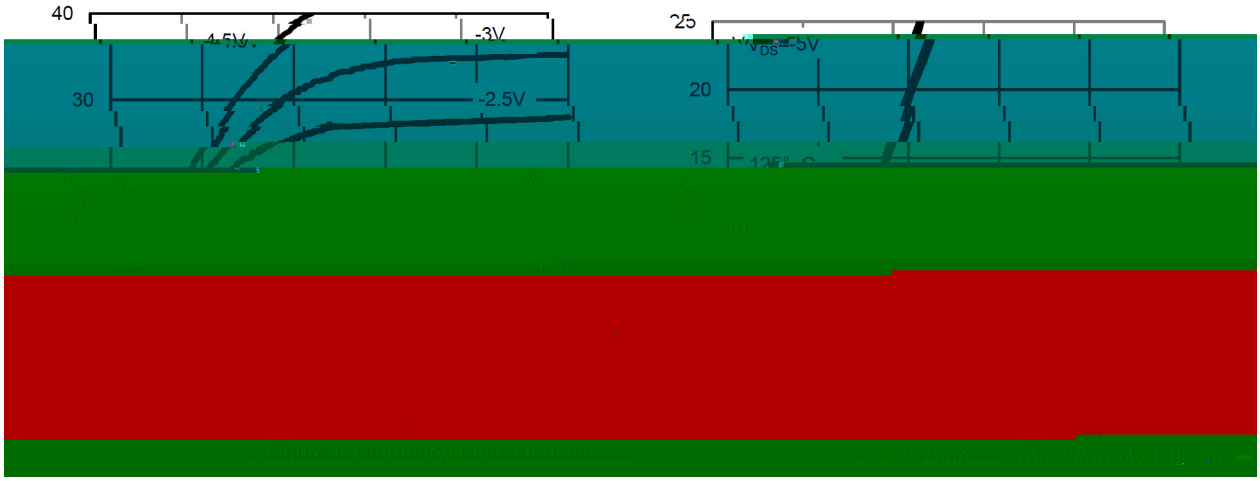
Load switch Battery protection.

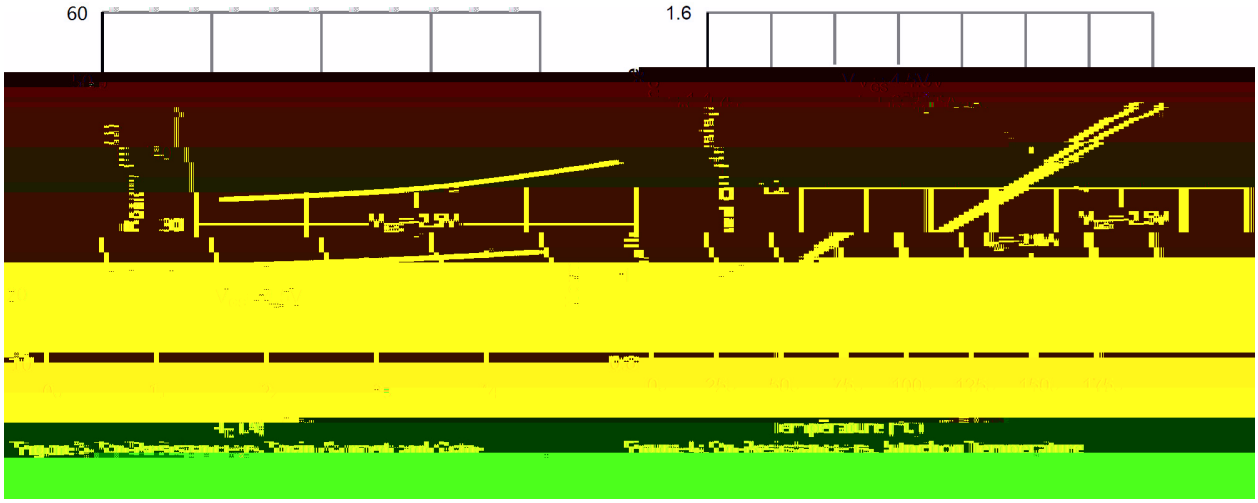


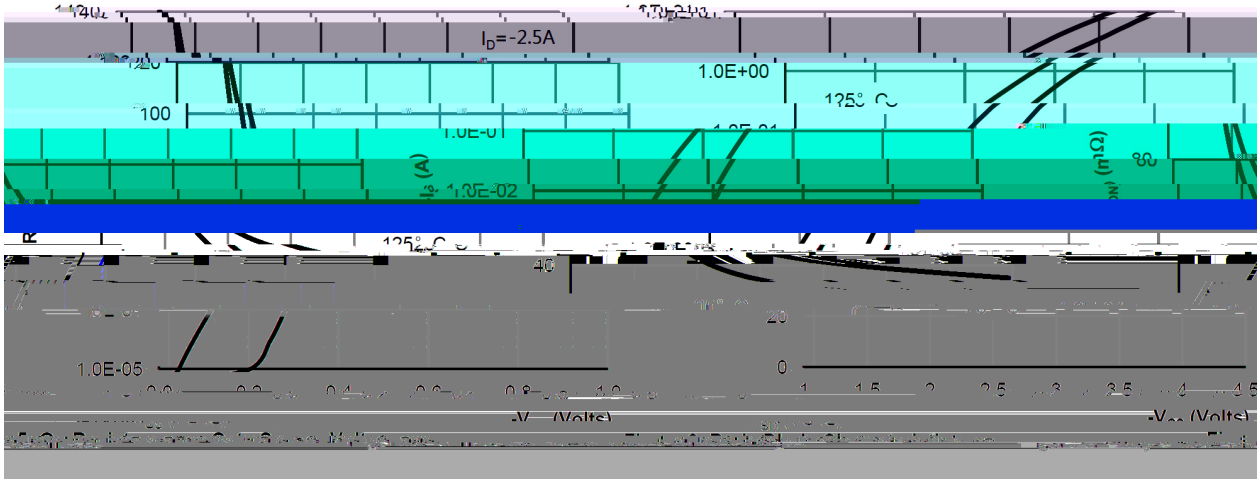
PIN1 G PIN 2 S PIN 3 D

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current-Continuous	I_D	-5.3	A
Drain Current-Continuous(T_A =100°C)	I_D	-3.3	A
Drain Current-Pulsed	I_{DM}	-21.2	A
Maximum Power Dissipation	P_D	1.3	W
Maximum Power Dissipation(T_A =100°C)	P_D	0.5	W
Operating Junction Temperature Range and Storage Temperature Range	T_J, T_{STG}	-55 to +150	° C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	96	° C/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	B_{VDSS}	V_{GS}=0V I_D =-250μA	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V V_{GS}=0V			-1	uA
Gate-Body Leakage	I_{GSS}	V_{GS}=±10V V_{DS}=0V			± 10	uA
Gate Threshold Voltage	V_{TH}	V_{DS}=V_{GS} I_D=-250μA	-0.5		-1.0	V
Drain-Source On-State Resistance	R_{DS}	V_{GS}=-4.5V I_D=-2.5A		25.5	33.2	mΩ
		V_{GS}=-2.5V I_D=-2.0A		35.2	46.8	
Gate resistance	R_g	V_{GS}=0V, V_{DS}=0V, f=1.0MHz		580		Ω
Input Capacitance	C_{iss}	V_{DS}=-10V V_{GS}=0V f=1MHz		260		pF
Output Capacitance	C_{oss}			105		
Reverse Transfer Capacitance	C_{rss}			20		
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-10V V_{GS}=-4.5V R_{GEN}=3Ω R_L=2Ω		12		ns
Rise Time	t_r			35		
Turn-Off Delay Time	$t_{d(off)}$			30		
Fall Time	t_f			10		
Total Gate Charge	Q_g	V_{DS}=-10V I_{DS}=-5A V_{GS}=-4.5V		9		nC
Gate-Source Charge	Q_{gs}			1.5		
Gate-Drain Charge	Q_{gd}			1.5		
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_{DS}=-1A			-1.2	V
Reverse Recovery Time	t_{rr}	I_F=-5A, dI/dt=100A/μs		170		ns
Reverse Recovery Charge	Q_{rr}	I_F=-5A, dI/dt=100A/μs		60		nC


40
-4.5V
-3V
30
-2.5V
25
20
15


60
1.6


I_D=-2.5A
100
1.0E+00
125° C
1.0E-05
40
20
0

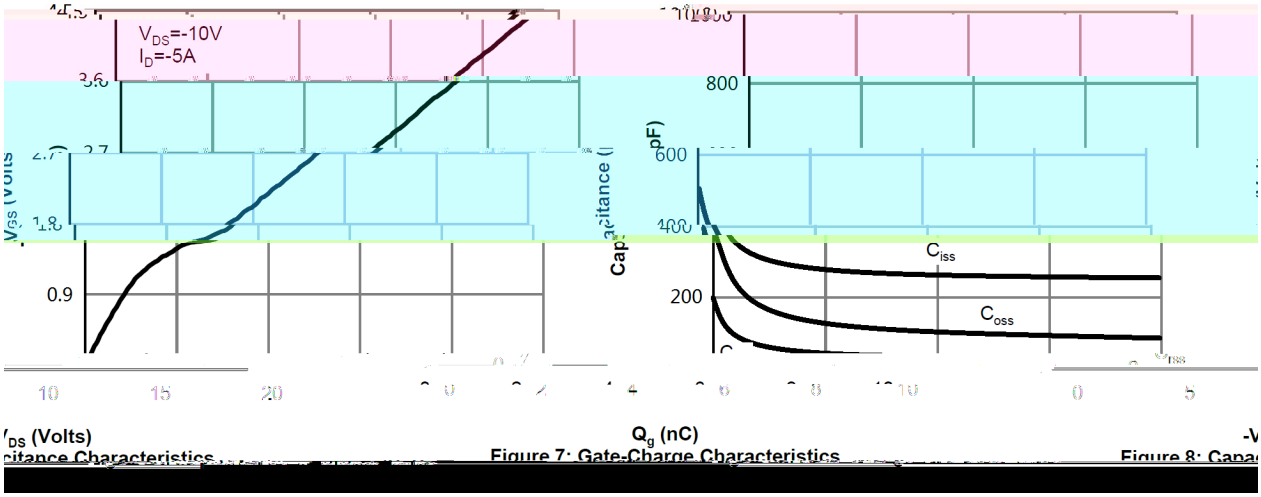
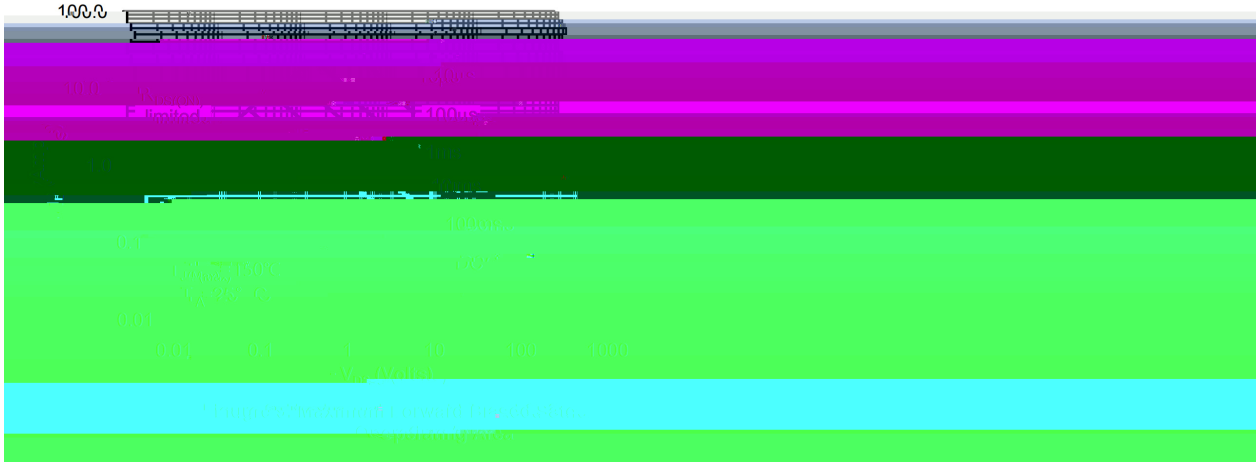
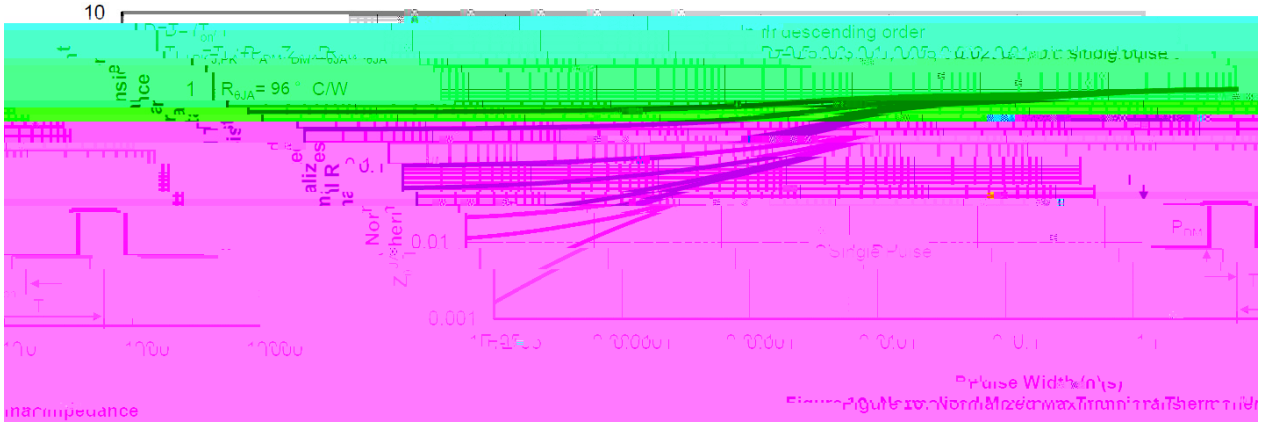


Figure 7: Gate-Charge Characteristics





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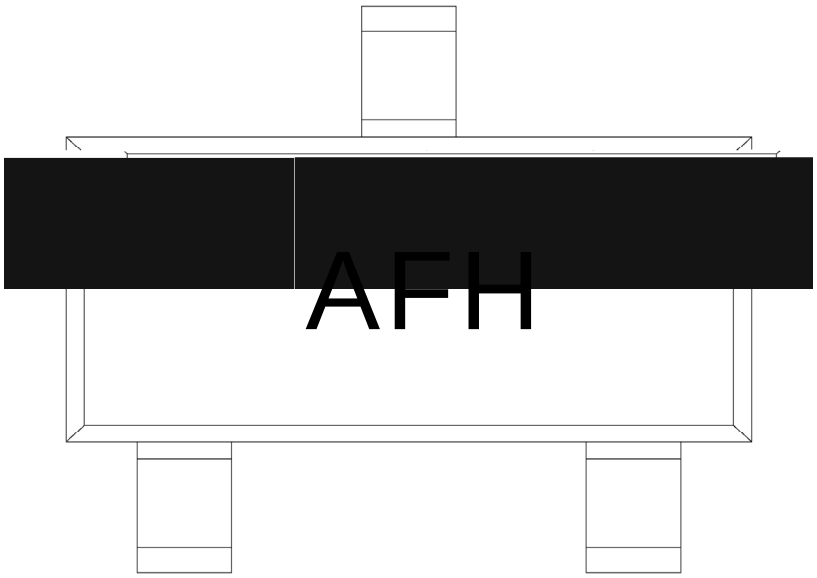

H:

AF:

Note:

H:	Company Code
AF	Product Type Code

Temperature Profile for IR Reflow Soldering(Pb-Free)

				Note:
1	150	180	60 90sec;	1.Preheating:150~180 , Time:60~90sec.
2	245±5		5±0.5sec;	2.Peak Temp.:245±5 , Duration:5±0.5sec.
3		2 10	/sec.	3. Cooling Speed: 2~10 /sec.

260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

/ REEL