SOT23-3 P MOS

P- CHANNEL MOSFET in a SOT23-3 Plastic Package.

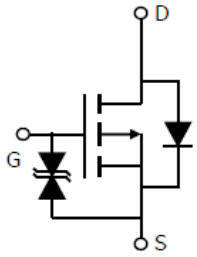
V_{DS} (V)=-20V I_D =-5.0A(V_{GS}= ± 10V)

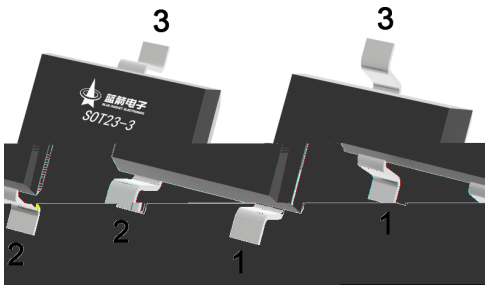
$R_{DS(ON)}$< 40 mΩ,V_{GS}= -4.5V

$R_{DS(ON)}$< 53 mΩ,V_{GS}= -2.5V

HF Product.

Load switch Battery protection.





PIN1 G PIN 2 S PIN 3 D

Marking	AFH

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 10	V
Drain Current-Continuous	I_D	-5.0	A
Drain Current-Pulsed	I_{DM}	-16	A
Maximum Power Dissipation	P_D	1.5	W
Storage Temperature Range	T_{STG}	-55 to +150	° C
Operating Junction Temperature Range	T_J	-55 to +150	° C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	83.3	° C/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	B_{VDSS}	V_{GS}=0V I_{DS} =-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_{DS}=-250μA	-0.3	-0.6	-0.9	V
Drain-Source On-State Resistance	R_{DS}	V_{GS}=-4.5V I_{DS}=-4A		35	40	mΩ
		V_{GS}=-2.5V I_{DS}=-4A		45	53	
Input Capacitance	C_{iss}	V_{DS}=-10V V_{GS}=0V f=1MHz		935		pF
Output Capacitance	C_{oss}			92		
Reverse Transfer Capacitance	C_{rss}			83		
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-10V V_{GS}=-4.5V R_G=3Ω R_L=2.2Ω		12		ns
Rise Time	t_r			11		
Turn-Off Delay Time	$t_{d(off)}$			82		
Fall Time	t_f			35		
Total Gate Charge	Q_g	V_{DS}=-10V I_{DS}=-5.0A V_{GS}=-4.5V		8.5		nC
Gate to Source Gate Charge	Q_{gs}			1		
Gate to Drain “Miller” Charge	Q_{gd}			2.5		
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_{DS}=-1A			-1.2	V

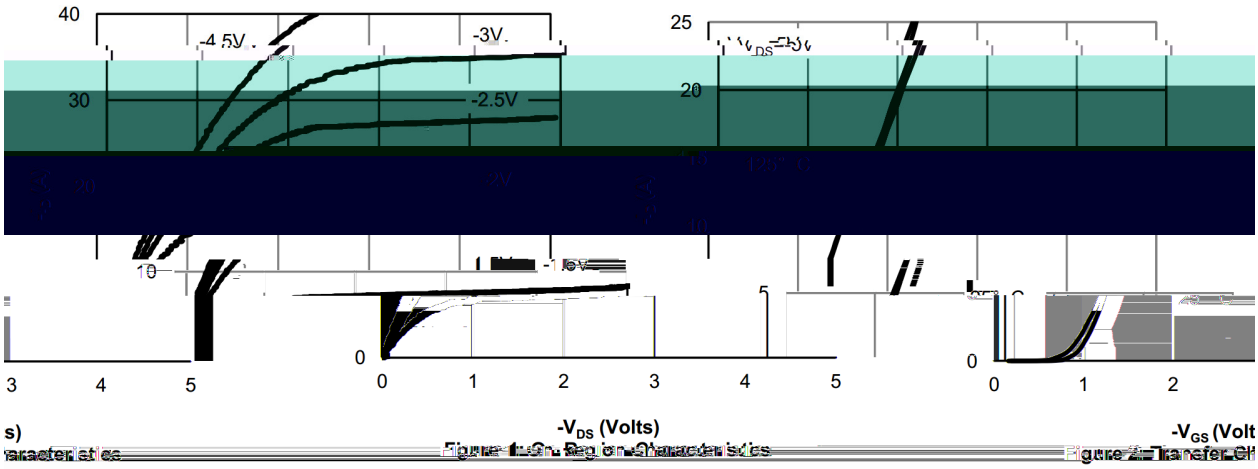


Figure 1. On-Region Characteristics

Figure 2. Transfer Ch

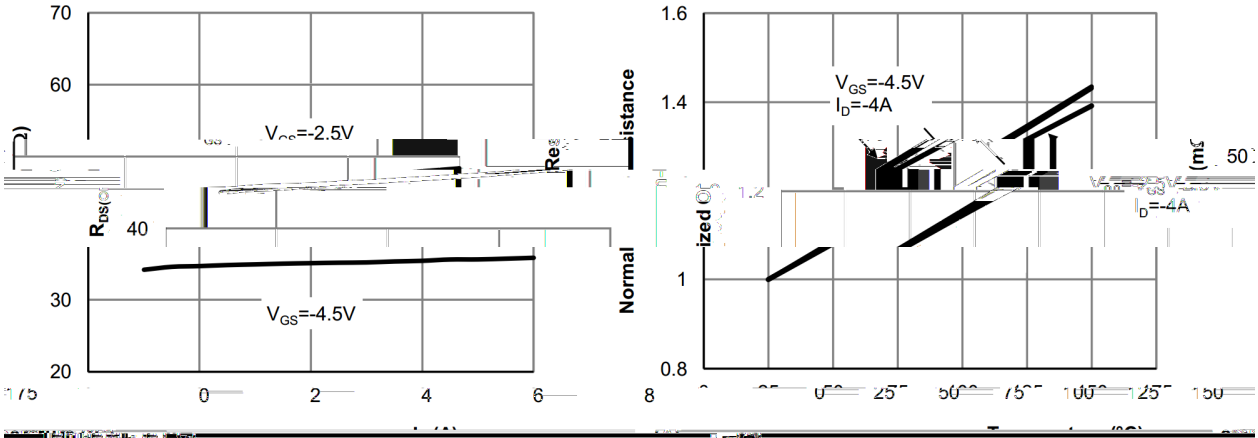
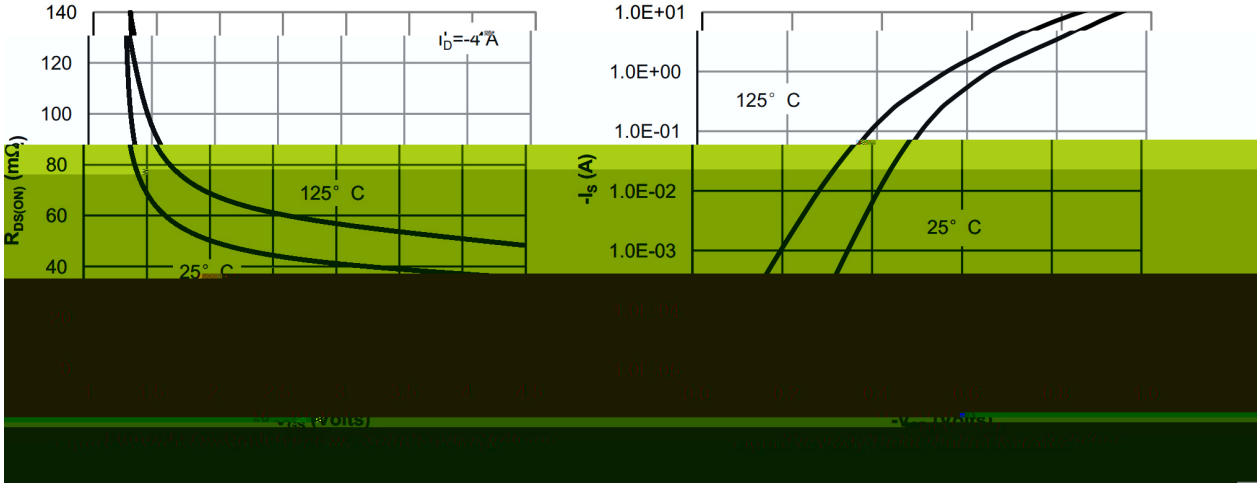


Figure 3. On-Resistance vs. Junction Temperature

Figure 4. On-Resistance vs. Drain Current and Gate Voltage



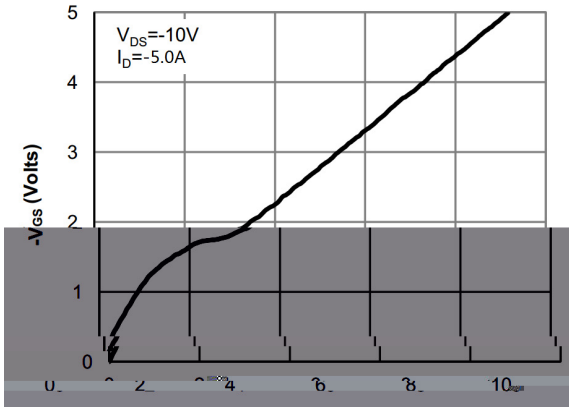


Figure 7: Gate Charge Characteristics

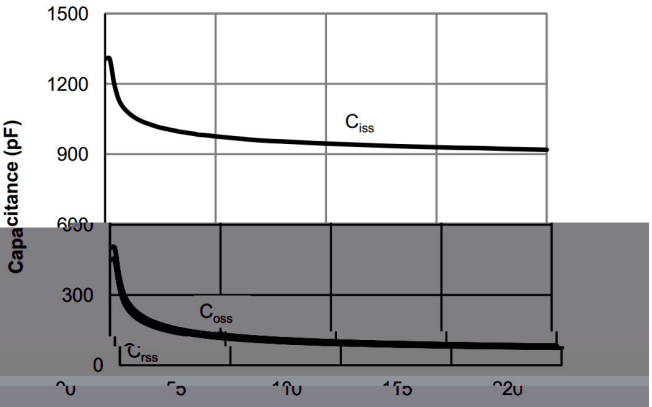


Figure 8: Capacitance Characteristics

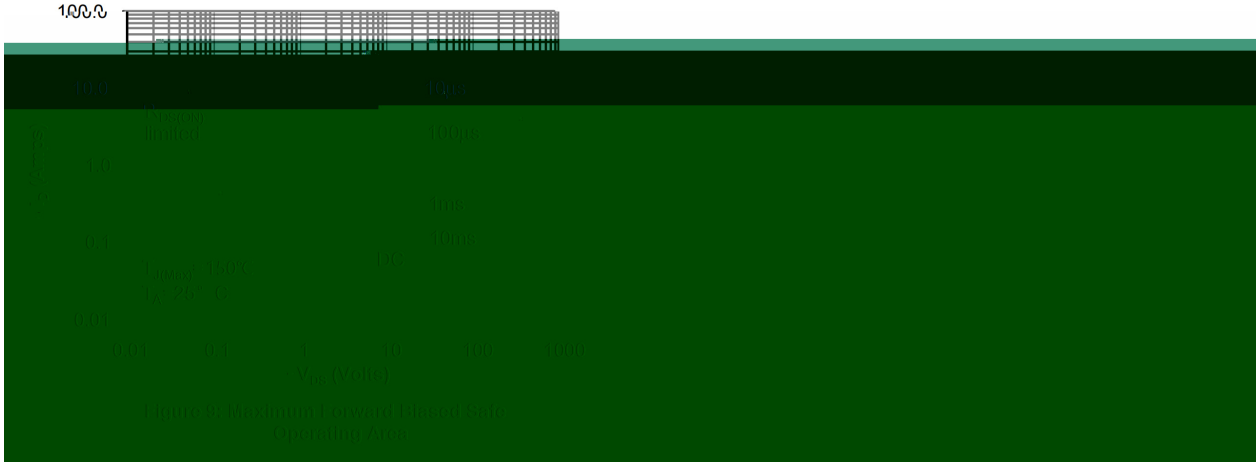


Figure 9: Maximum Forward Biased Safe Operating Area

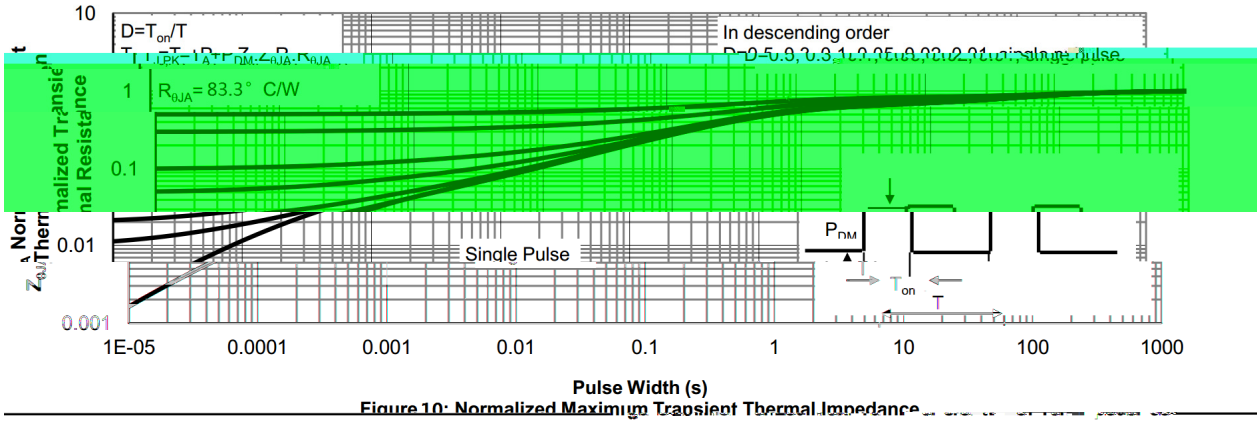
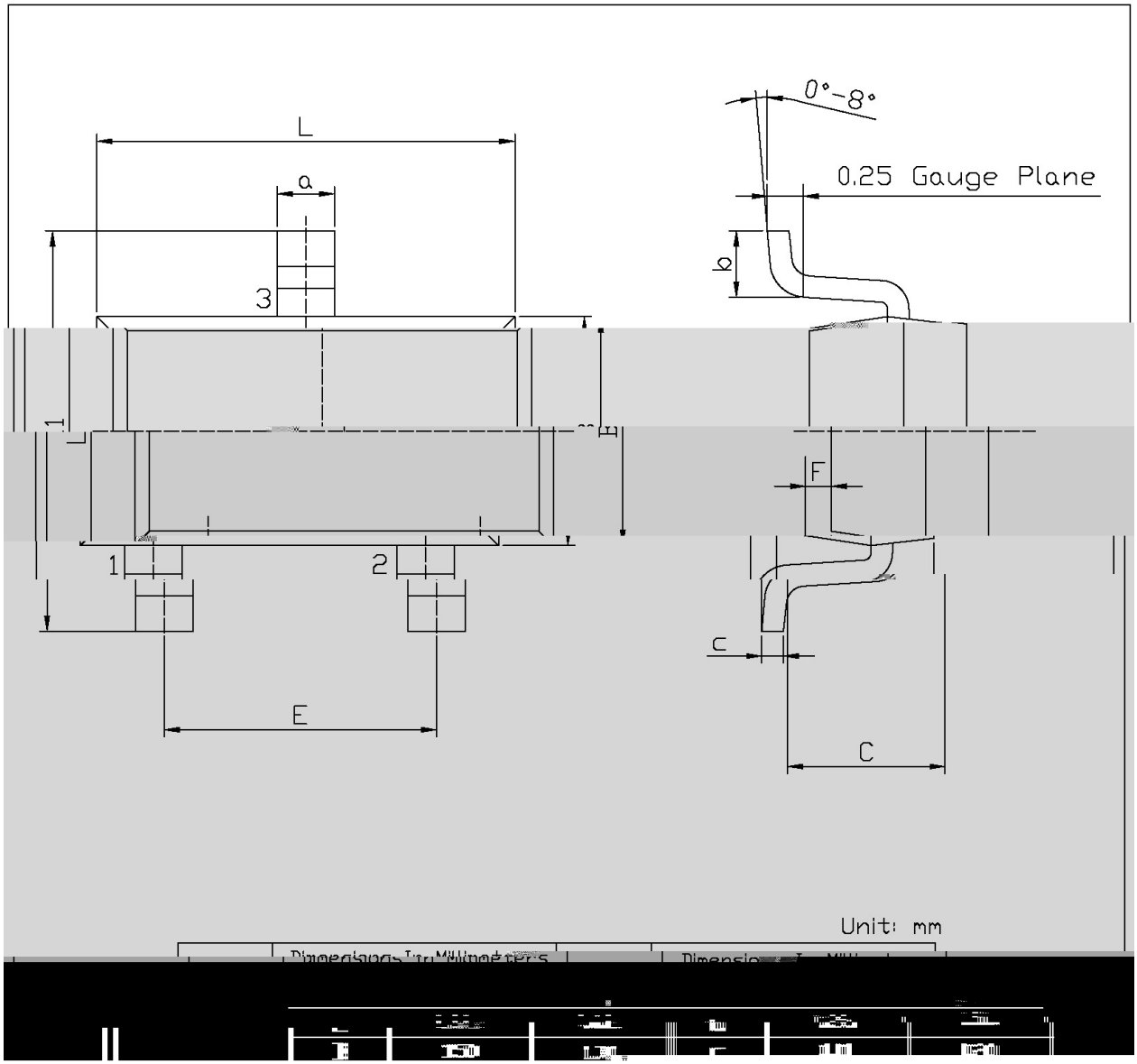
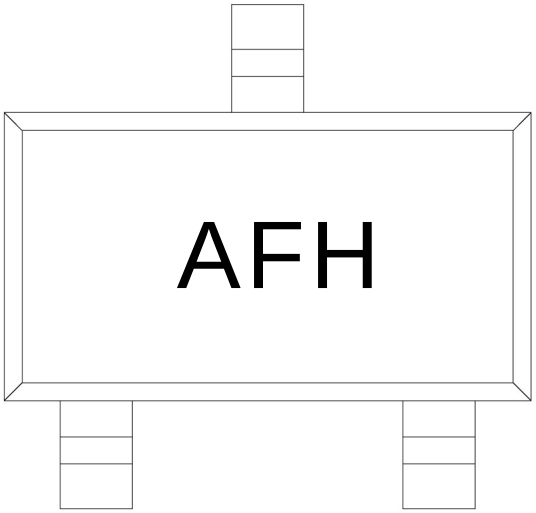


Figure 10: Normalized Maximum Transient Thermal Impedance


0°-8°
L
a
0.25 Gauge Plane
b
3
1
B
F
1
2
c
E
C
Unit: mm



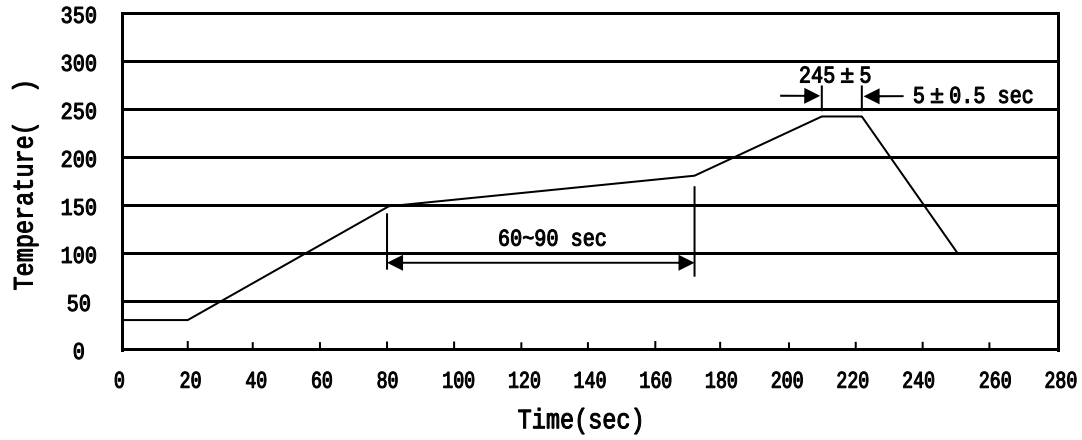
H:

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

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT23-3	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×435×230