

/ Descriptions

SOT-23 N MOS

- CHANNEL MOSFET in a SOT-23 Plastic Package.

/ Features

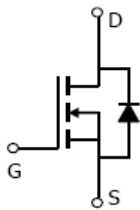
 $V_{DS} (V) = 30V$ $I_D = 5.5 A (V_{GS} = 20V)$ $R_{DS(ON)} < 31m\Omega (V_{GS} = 10V)$ $R_{DS(ON)} < 43m\Omega (V_{GS} = 4.5V)$

HF Product.

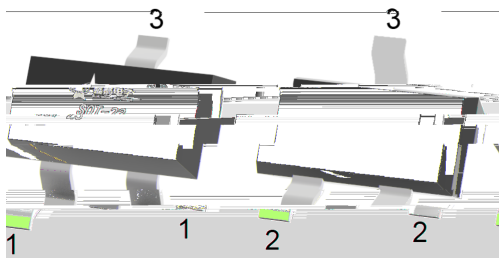
/ Applications

This device is suitable for use as a load switch or in PWM applications.

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 S

PIN 3 D

/ Marking

Marking

B4H

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Drain Current – Continuous	I_D	5.5	A
Pulsed Drain Current	I_{DM}	19	A
Gate-Source Voltage	V_{GS}	± 20	V
Total Power Dissipation	P_D	1.4	W
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to 150	
Maximum Junction-to-Ambient	R_{JA}	90	/W
Maximum Junction-to-Ambient		125	
Maximum Junction-to-Lead		80	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250 A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=24V$ $V_{GS}=0V$			1	A
		$V_{DS}=24V$ $V_{GS}=0V$ $T_J=55$			5	A
Gate-Body Leakage.	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250 A$	1.0	1.5	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)(1)}$	$V_{GS}=10V$ $I_D=5.5A$		20	31	m
	$R_{DS(on)(2)}$	$V_{GS}=4.5V$ $I_D=4A$		26	43	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$		0.77	1	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1MHz$		380		pF
Output Capacitance	C_{oss}			165		
Reverse Transfer Capacitance	C_{rss}			15		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V,$ $V_{DS}=15V,$ $I_D=5.5A$		5.2		nC
Total Gate Charge	$Q_{g(4.5V)}$			2.5		
Gate Source Charge	Q_{gs}			0.8		

/ Electrical Characteristic Curve

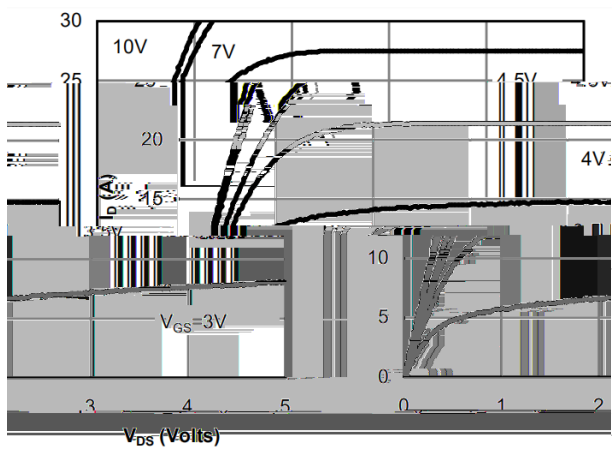


Fig 1: On-Region Characteristics

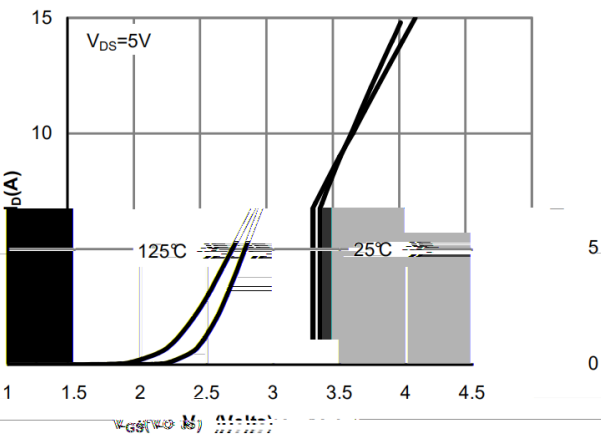


Figure 2: Transfer Characteristics

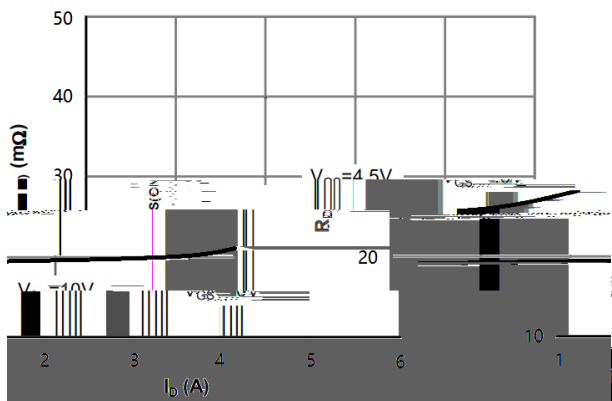


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

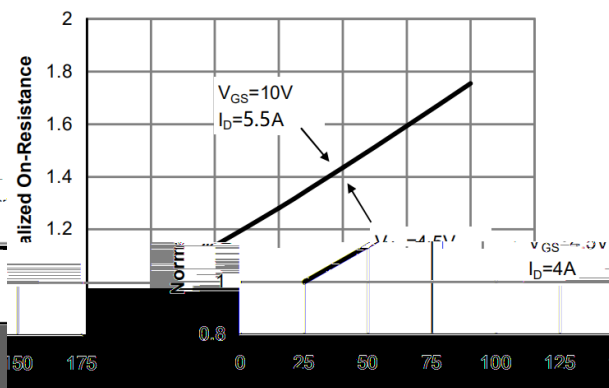


Figure 4: On-Resistance vs. Junction Temperature

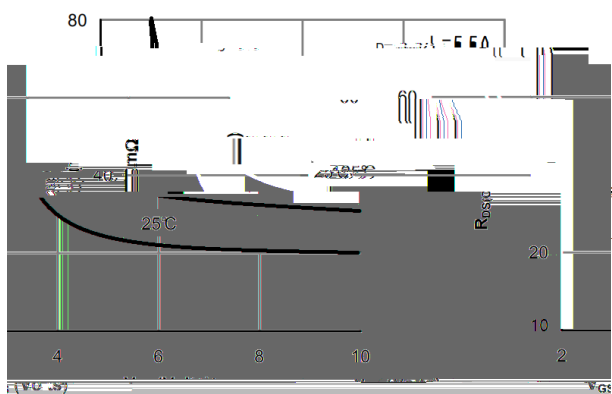


Figure 5: On-Resistance vs. Gate-Source Voltage

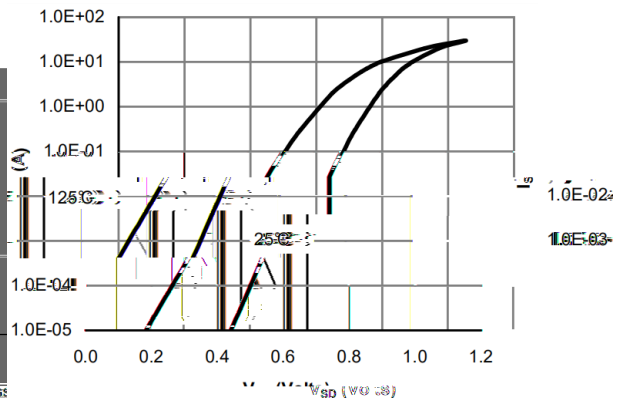
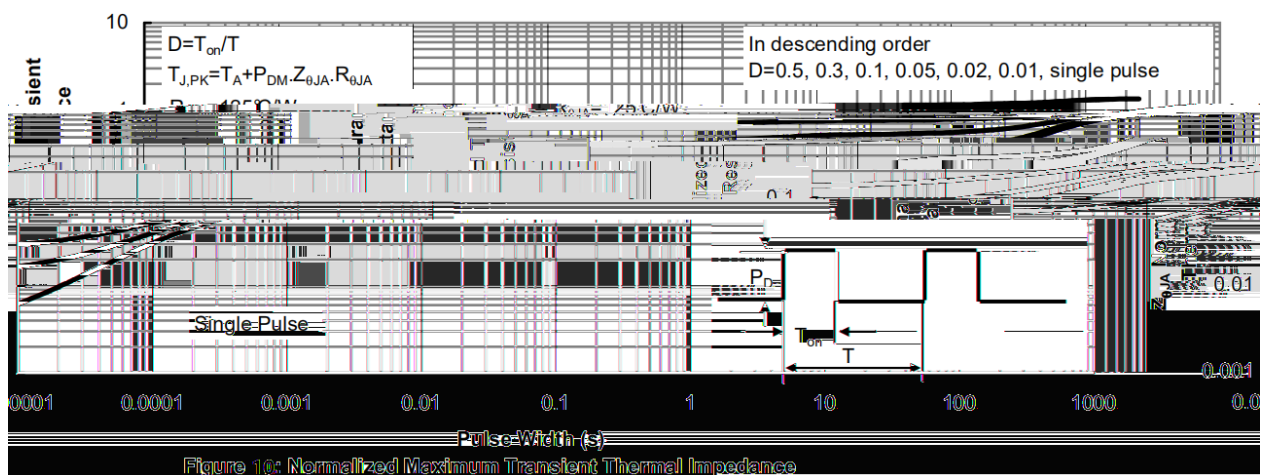
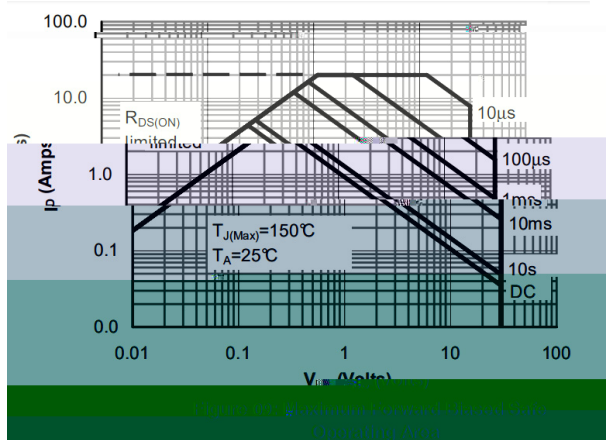
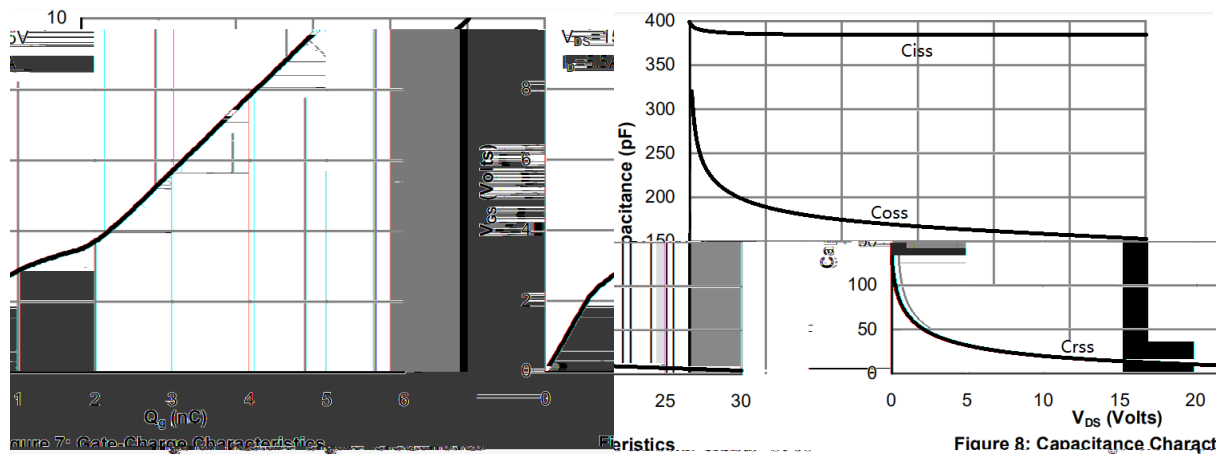


Figure 6: Body Diode Characteristics

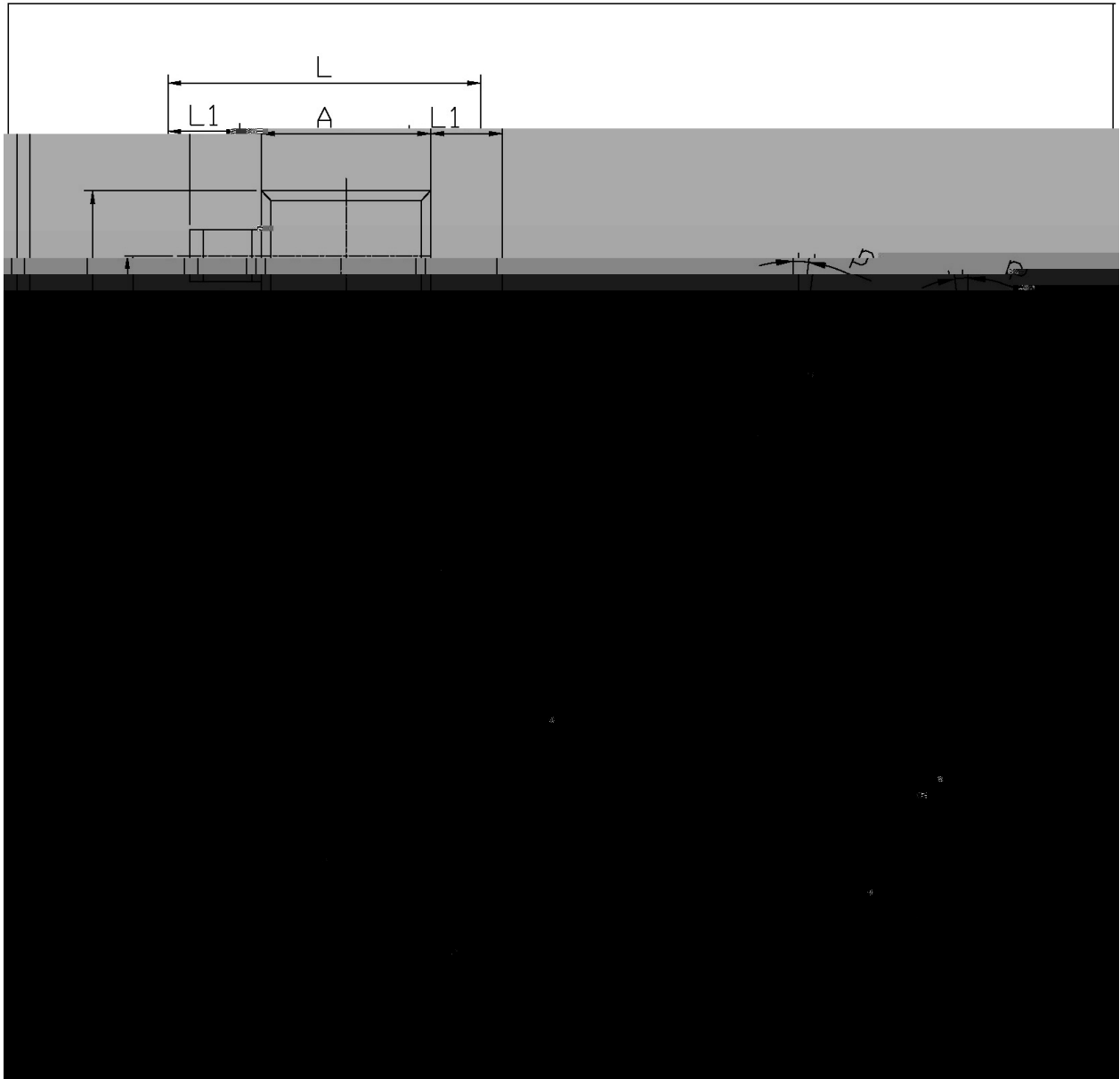
/ Electrical Characteristic Curve



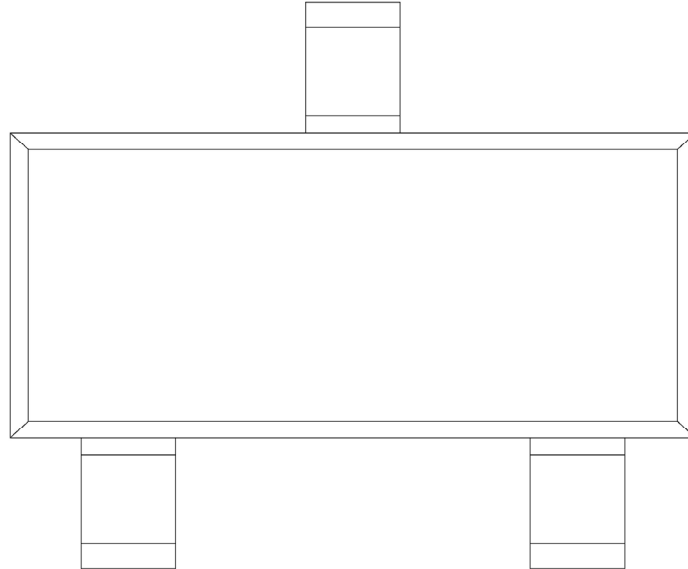
/ Package Dimensions

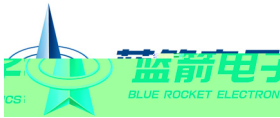
SOT-23

单位: mm



/ Marking Instructions





() / Temperature Profile for IR Reflow Soldering(Pb-Free)

- 1

150 180

60 90sec;
- 2

245 5

5 0.5sec;
- 3

2 10

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