/ Descriptions

SOT23-3 P MOS

- CHANNEL MOSFET in a SOT23-3 Plastic Package.

/ Features

V_{DS} (V) = -16V I_D = -7.0A

$R_{DS(ON)}$@-4.5V(Typ.)=18.7mΩ

$R_{DS(ON)}$@-2.5V(Typ.)=24.7mΩ

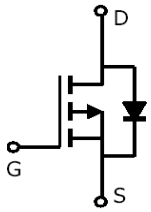
$R_{DS(ON)}$@-1.8V(Typ.)=32.7 mΩ

HF Product.

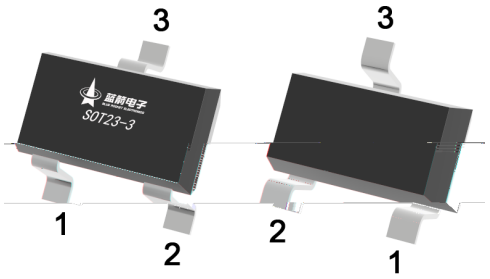
/ Applications

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 S PIN 3 D

/ Marking

Marking	CBH

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-16	V
Gate-Source Voltage	V_{GSS}	±12	V
Continuous Drain Current	I_D	-7.0	A
Pulsed Drain Current	I_{DM}	-30	A
Power Dissipation for Single Operation	P_D	1.2	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	100	/W

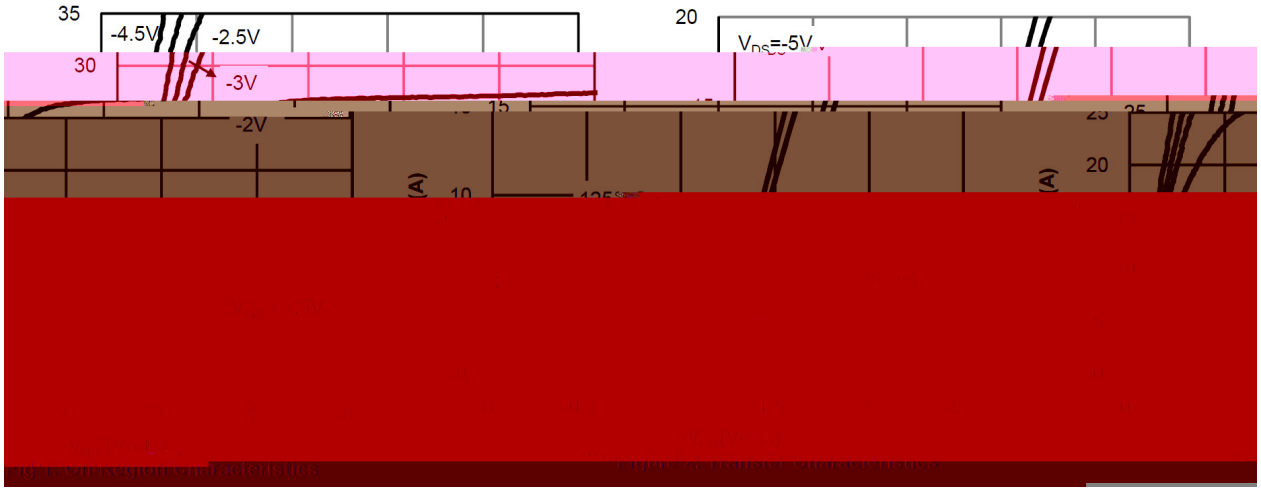
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA	V_{GS}=0V	-16	-18.5		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-12V	V_{GS}=0V			-1.0	μA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V	V_{GS}=±12V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=-250μA	-0.3	-0.6	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V	I_D=-3.5A		18.7	21	m
		V_{GS}=-2.5V	I_D=-3.5A		24.7	28	
		V_{GS}=-1.8V	I_D=-1A		32.7	100	
Diode Forward Voltage	V_{SD}	I_S=-1A	V_{GS}=0V			-1.2	V
Gate resistance	Rg	V_{GS}=0V, f=1MHz	V_{DS}=0V,		8.4		
Input Capacitance	C_{iss}	V_{GS}=0V f=1MHz	V_{DS}=-5V		1125		pF
Output Capacitance	C_{oss}				260		
Reverse Transfer Capacitance	C_{rss}				195		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	V_{GS}=-4.5V, V_{DS}=-10V, I_D=-7.0A		10.4		nC
Gate Source Charge	Q_{gs}			1.1		
Gate Drain Charge	Q_{gd}			2.1		
Turn–On Delay Time	$t_{d(on)}$	V_{GS}=-4.5V I_D=-7.0A V_{DS}=-10V R_{GEN}=3Ω		11.4		ns
Turn–On Rise Time	t_r			49.3		
Turn–Off Delay Time	$t_{d(off)}$			55.9		
Turn–Off Fall Time	t_f			31.6		

/ Electrical Characteristic Curve



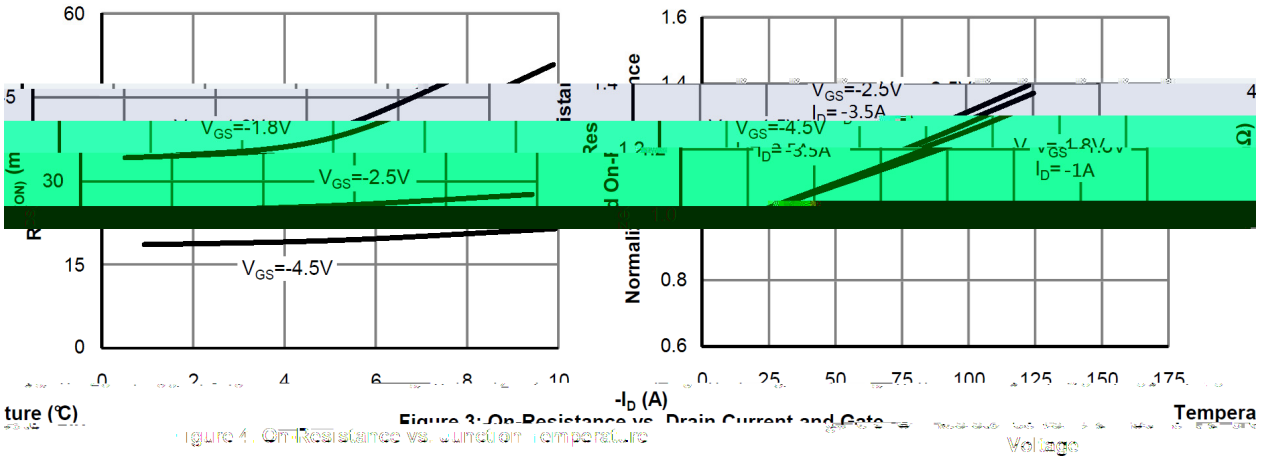


Figure 4: On-Resistance vs. Junction Temperature

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

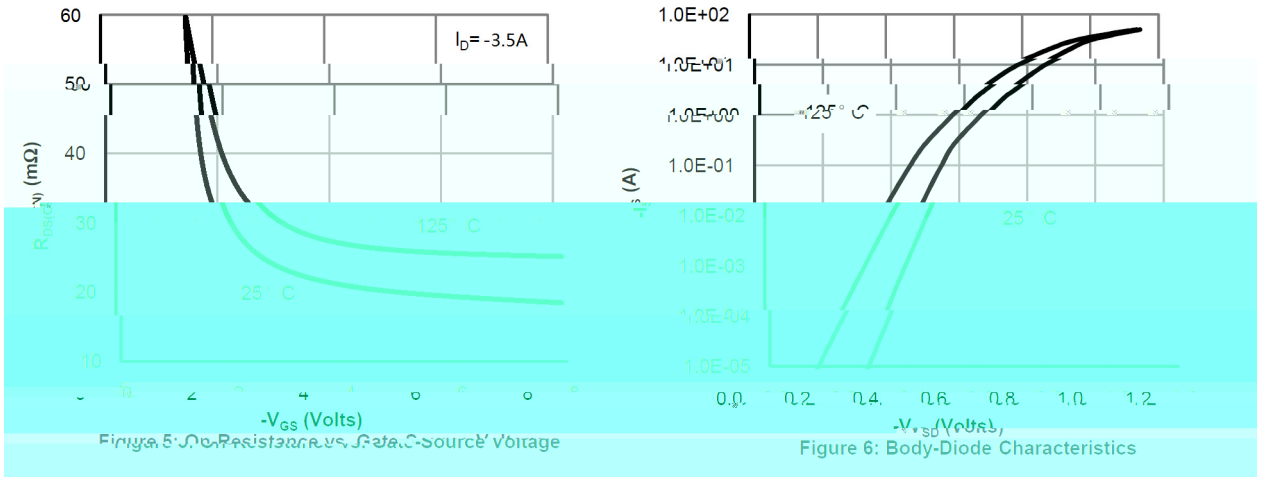
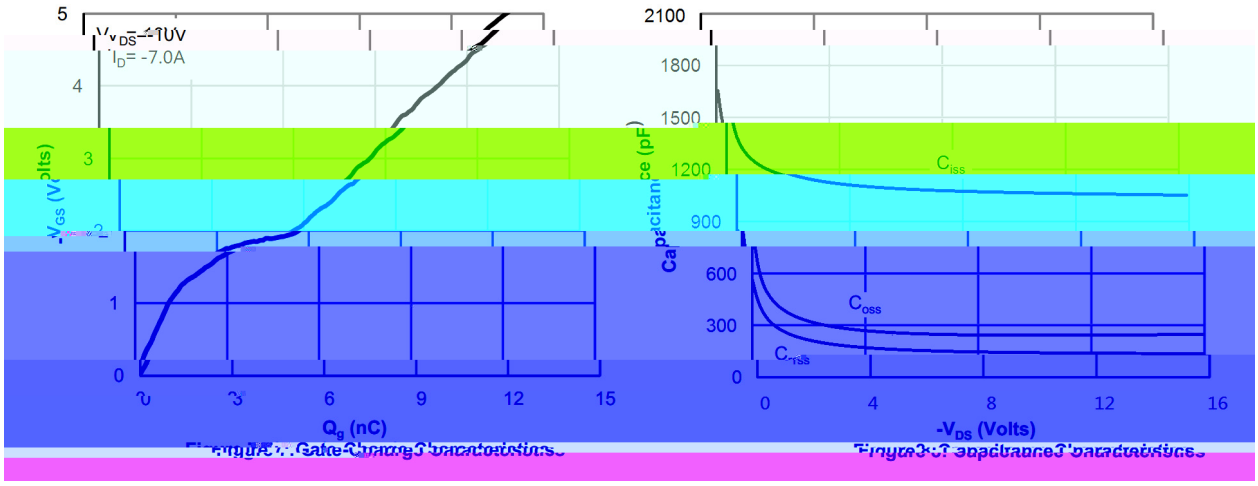
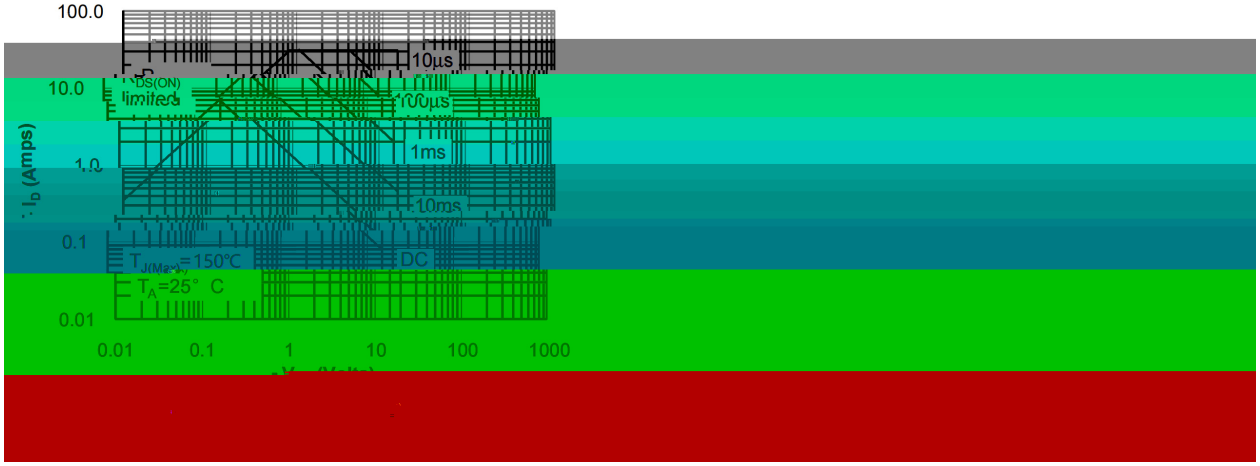


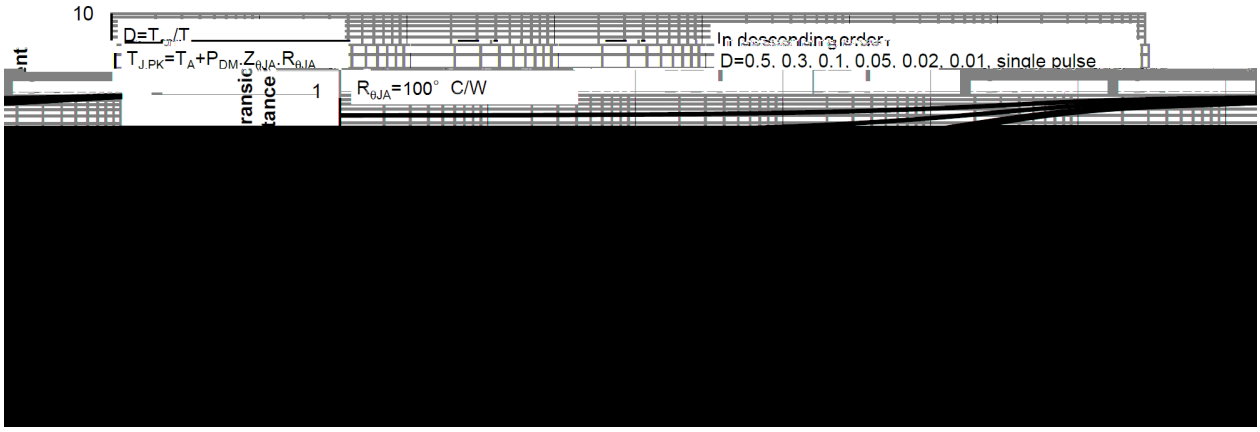
Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

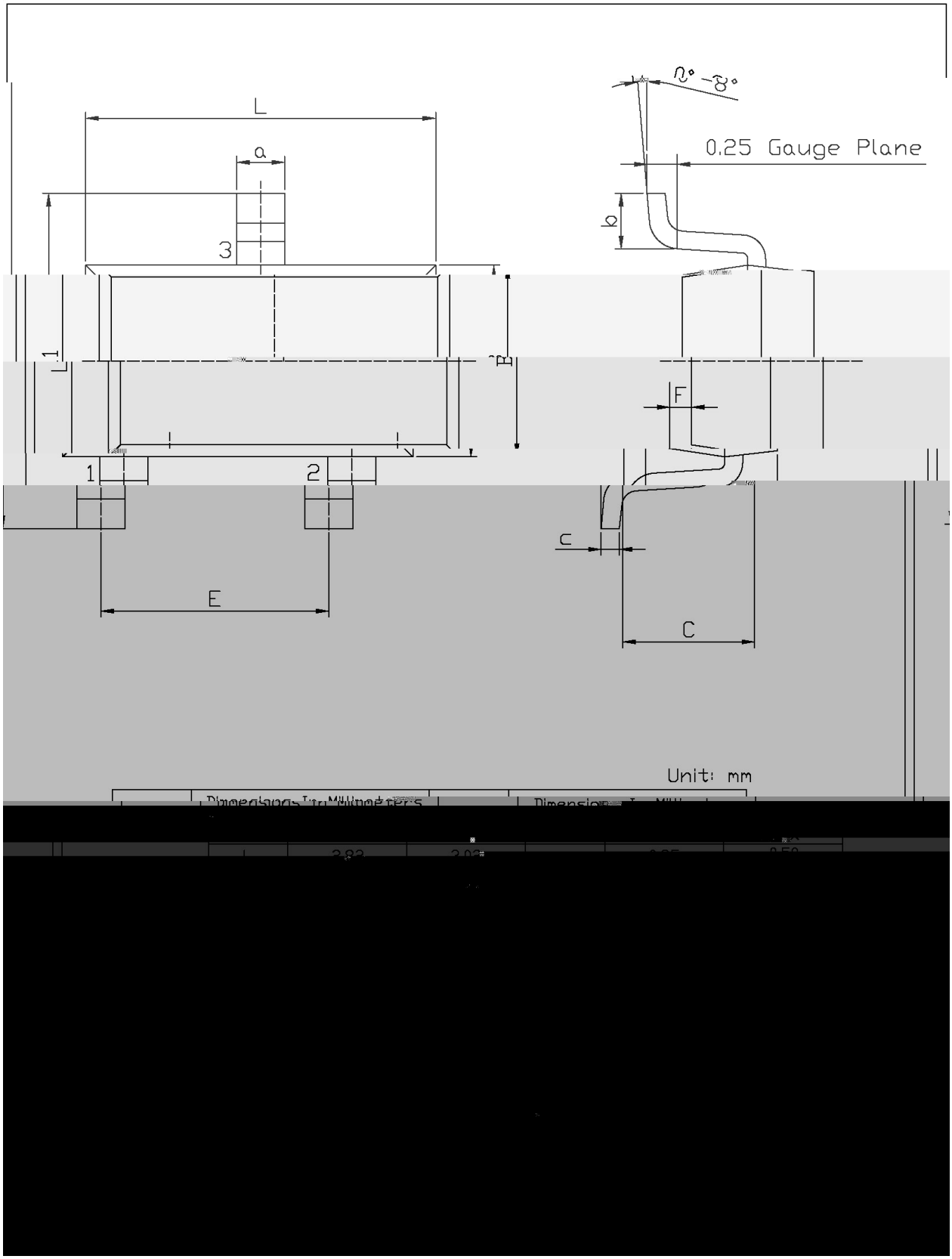
/ Electrical Characteristic Curve







/ Package Dimensions



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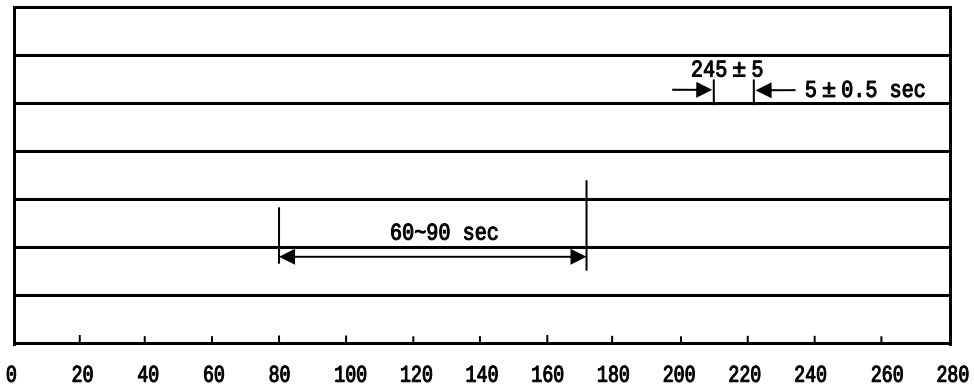
( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



		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.

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ 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

/ Notices

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