

Rev.A Sep.-2022

SOT-23 P

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

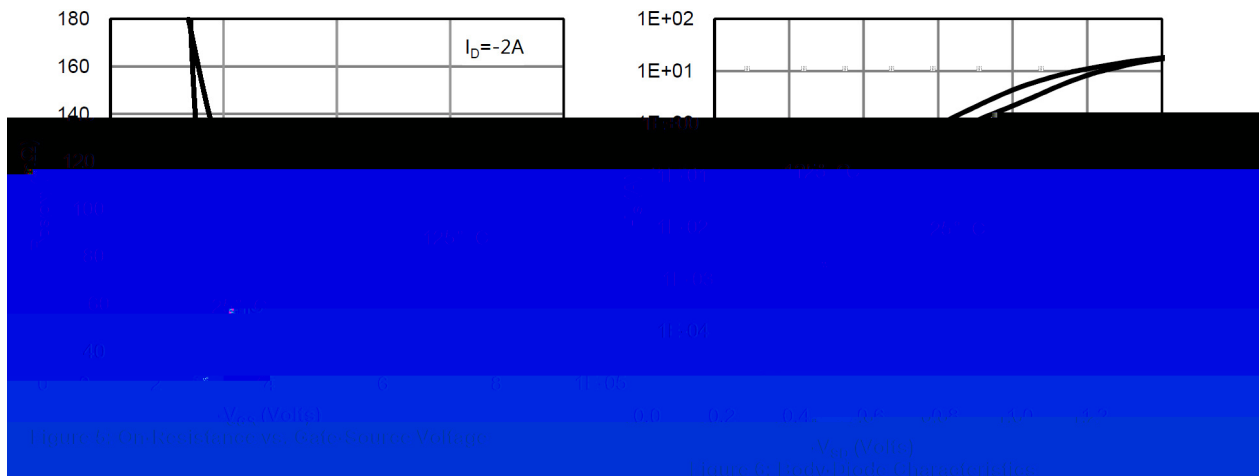
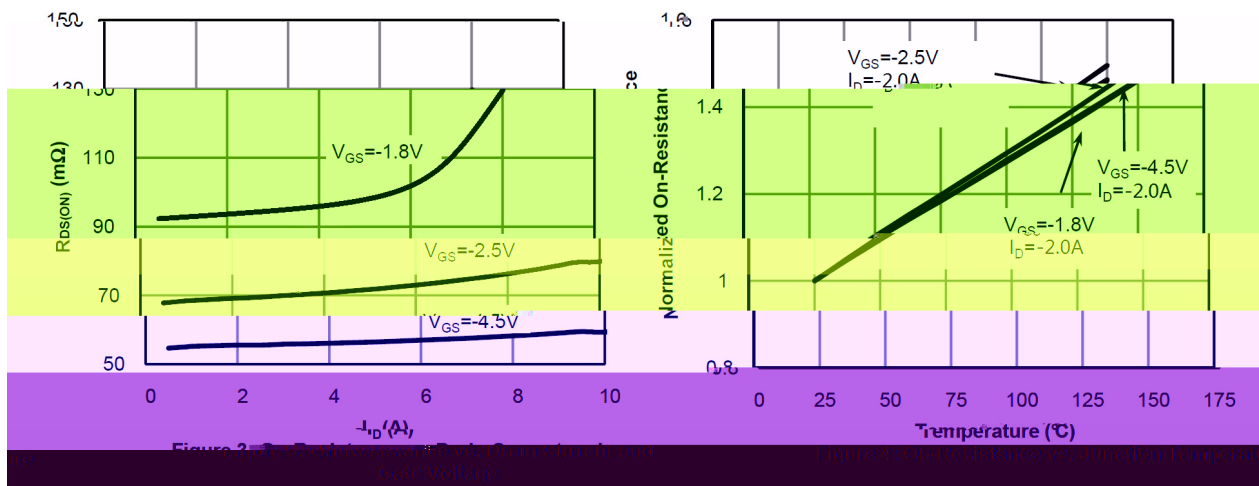
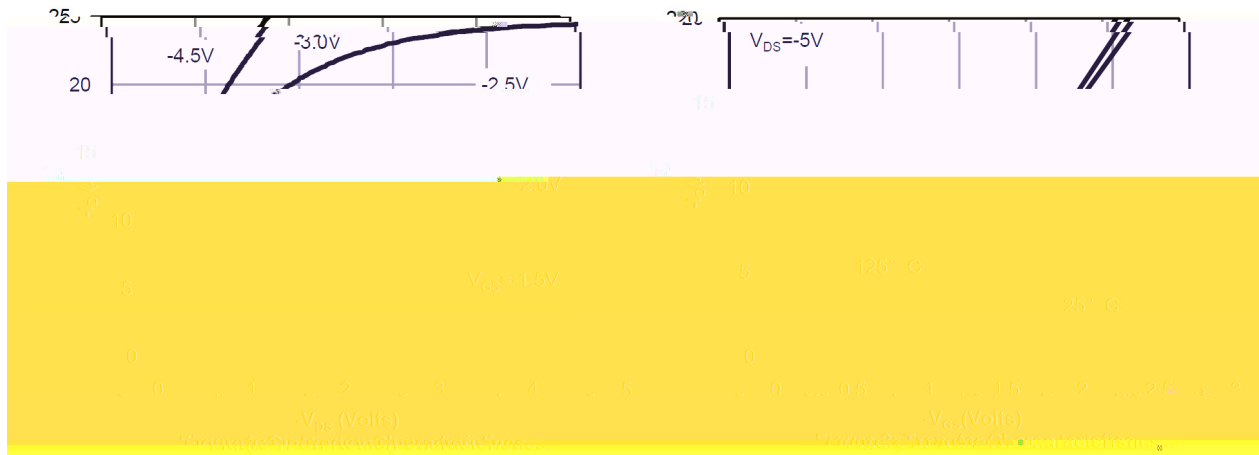
Ultra Low on-resistance. fast switching.Low on voltage, HF Product.

PWM

PWM application & Load switch

Parameter		Symbol	Rating	Unit
Drain–Source Voltage		V_{DS}	-20	V
Gate–Body Leakage Voltage		V_{GSS}	± 12	V
Drain Current – Continuous		I_D	-3	A
Pulsed Drain Current		I_{DM}	-15	A
Power Dissipation		P_D	1.4	W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 150	
Maximum Junction-to-Ambient	$t = 10s$	R_{JA}	90	/W
Maximum Junction-to-Ambient	Steady-State		125	/W
Maximum Junction-to-Lead	Steady-State	R_{JL}	80	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-20	-23		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-0.4		-1.0	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	$V_{GS}=-4.5V$ $I_D=-2A$		56	60	m Ω
		$V_{GS}=-2.5V$ $I_D=-2A$		70	76	m Ω
		$V_{GS}=-1.8V$ $I_D=-2A$		93	110	m Ω
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-20V$ $V_{GS}=0V$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 12V$ $V_{DS}=0V$			± 100	nA
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$ $T_J=25$			-1.2	V
Gate resistance	R_g	$f=1MHz$		7.2		Ω
Input Capacitance	C_{iss}	$V_{DS}=-10V$ $V_{GS}=0V$ $f=1.0MHz$		760		pF
Output Capacitance	C_{oss}			170		
Reverse Transfer Capacitance	C_{rss}			230		
Total Gate Charge	Q_g	$V_{DS}=-10V$ $V_{GS}=-4.5V$ $I_D=-3A$		8.7		nC
Gate-to-Source Charge	Q_{gs}			1.5		
Gate-to-Drain Charge	Q_{gd}			2.3		
Turn–On Delay Time	$t_{d(on)}$	$V_{DS}=-10V$ $V_{GS}=-4.5V$ $R_L=3.3\Omega$ $R_{GEN}=6\Omega$		7.3		ns
Turn–On Rise Time	t_r			25		
Turn–Off Delay Time	$t_{d(off)}$			54		
Turn–Off Fall Time	t_f			55		



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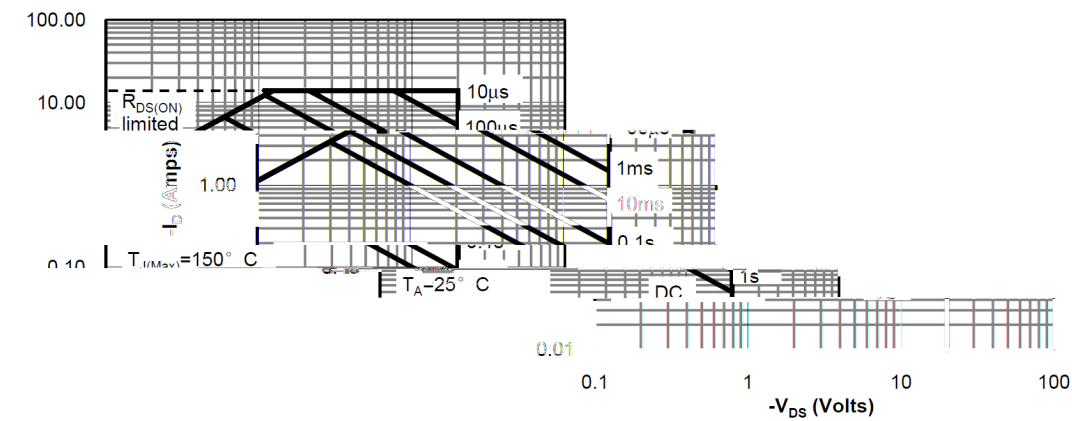
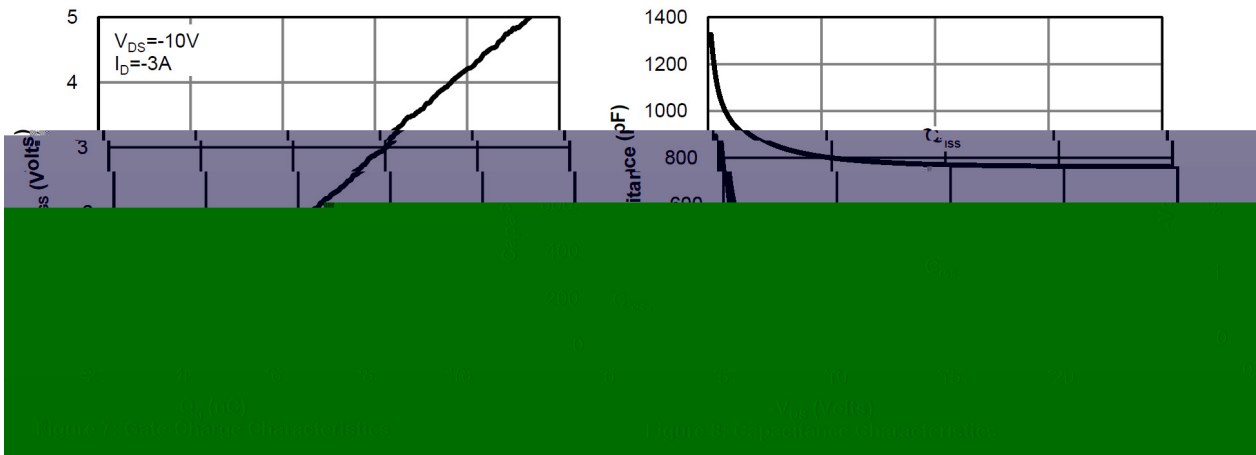
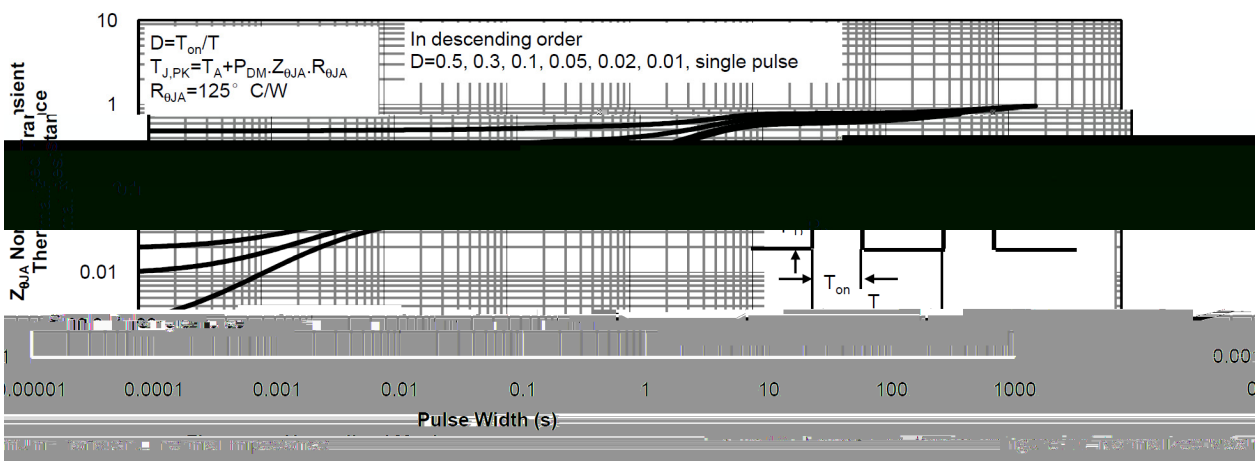


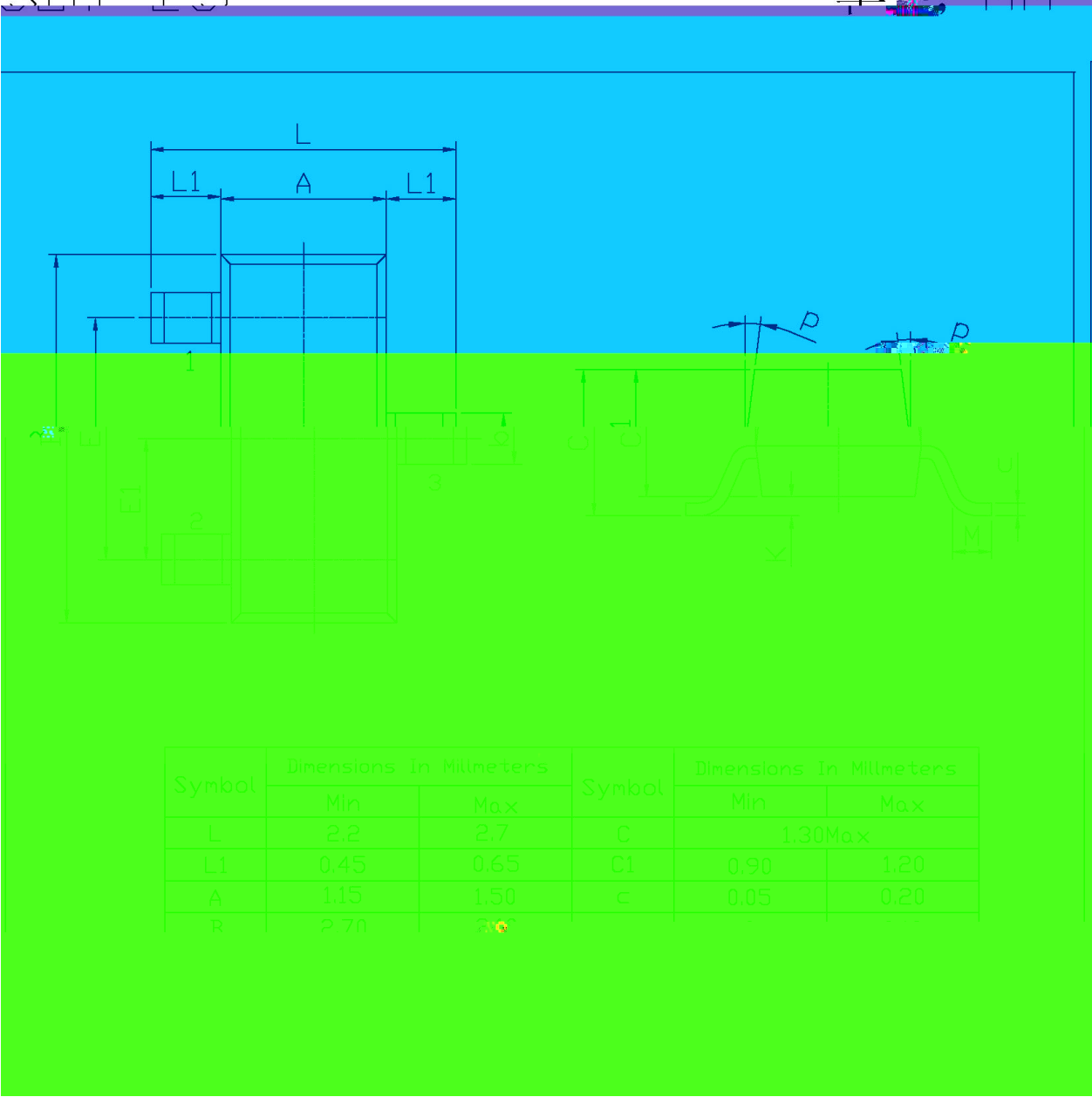
Figure 9: Maximum Forward Biased Safe Area

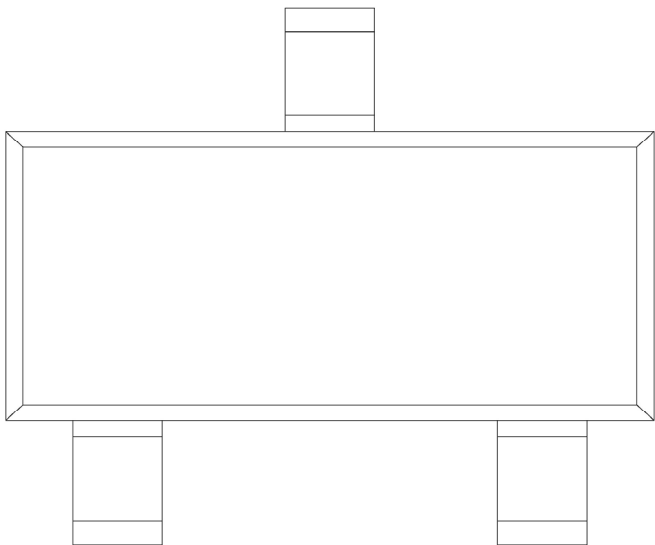
Operating Area



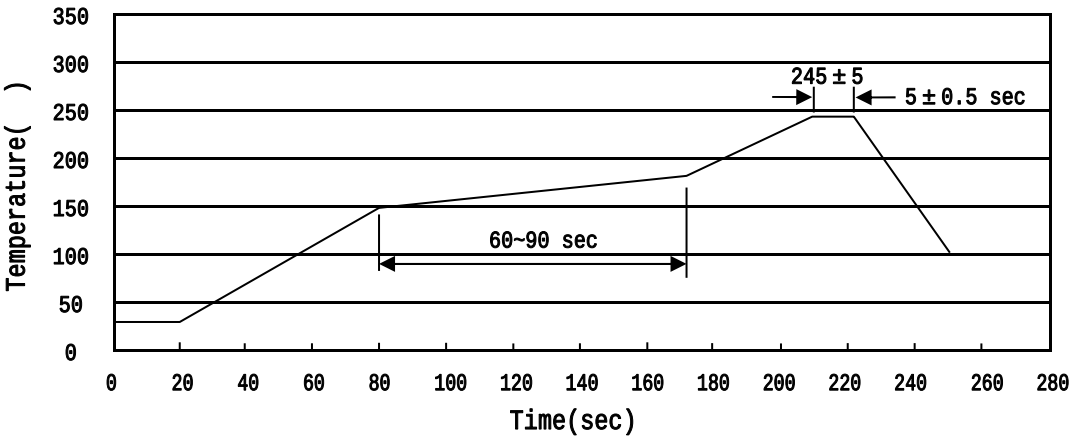
SOT-23

单位: mm





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 mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205