

Rev.A May.-2023

SOT-23 3P 沟槽 MOSFET

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

具有超低导通电阻、快速开关、低导通电压、符合 AEC-Q101 标准的高可靠性、HF 产品。

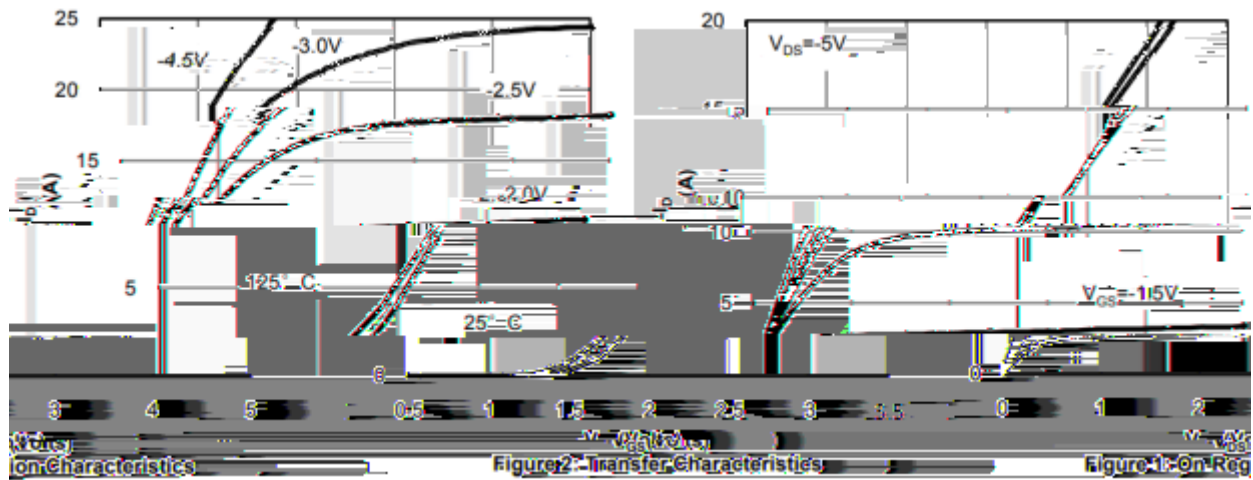
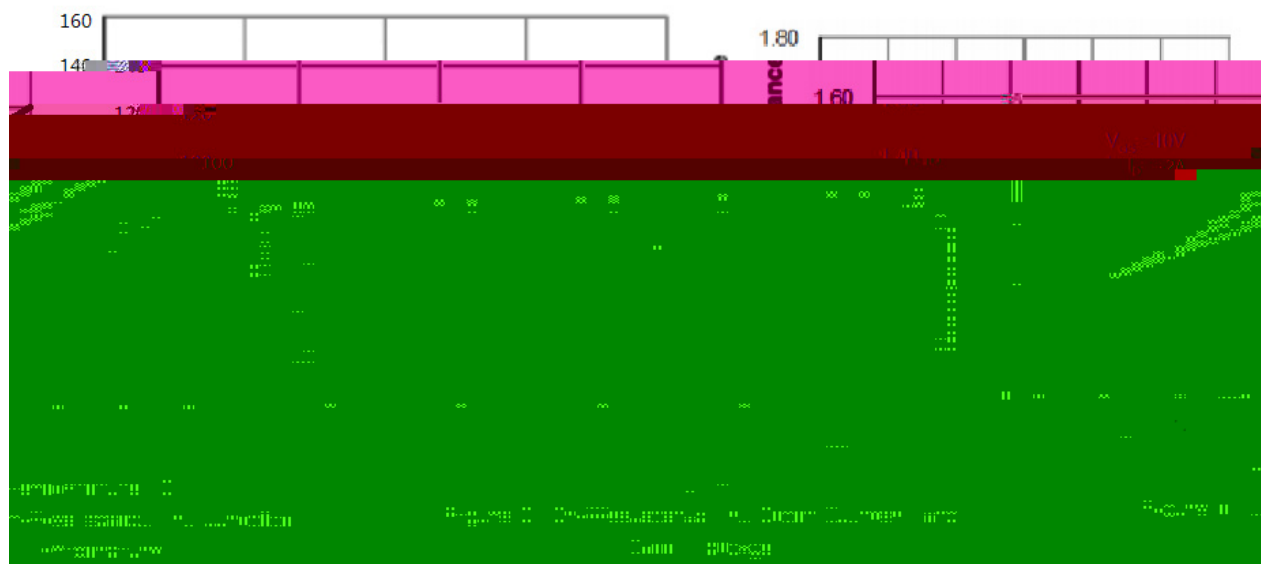
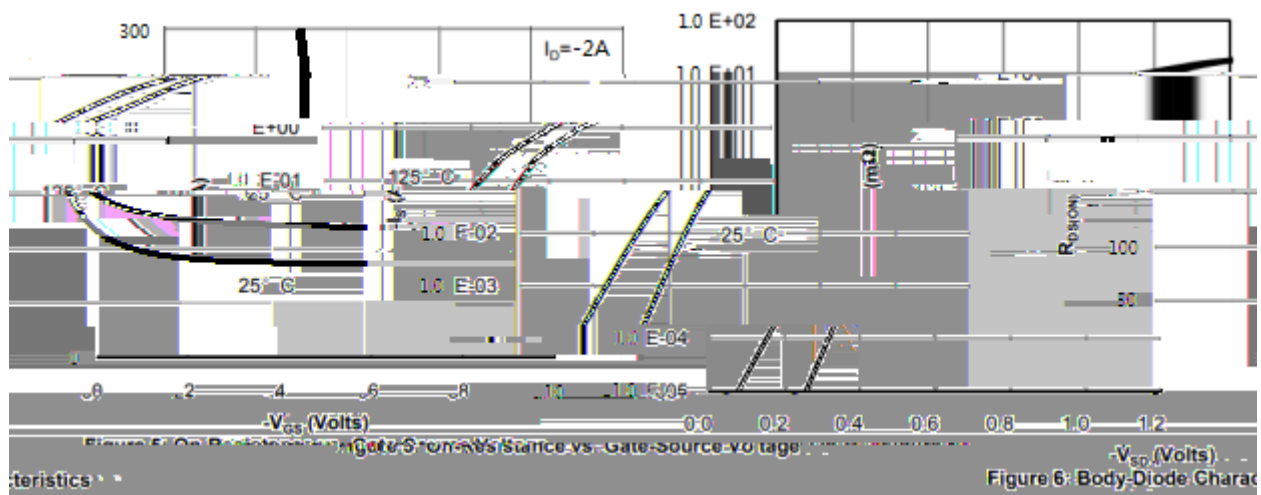
Ultra Low on-resistance. fast switching. Low on voltage, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

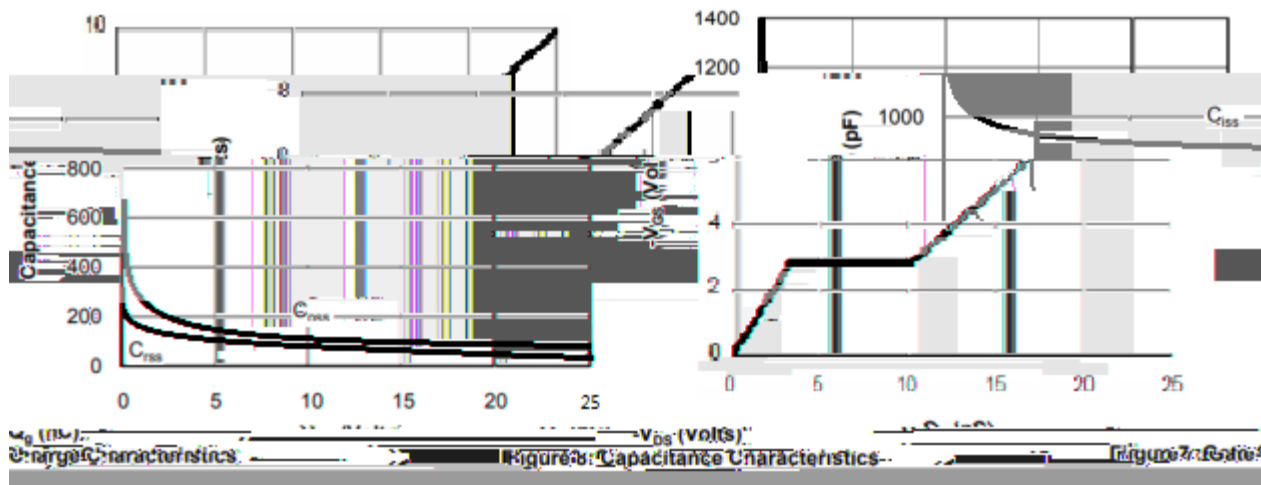
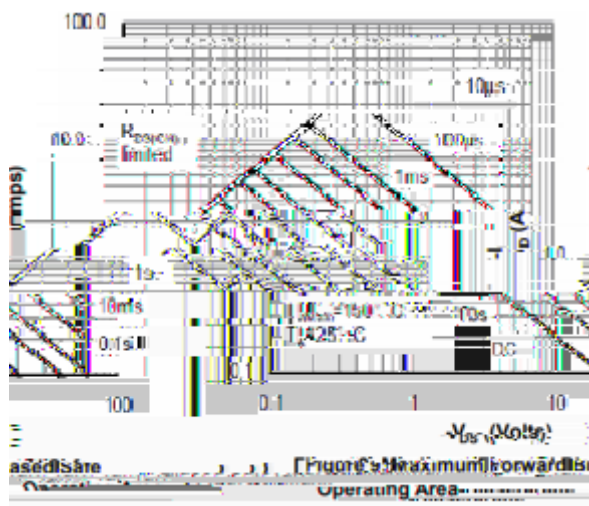
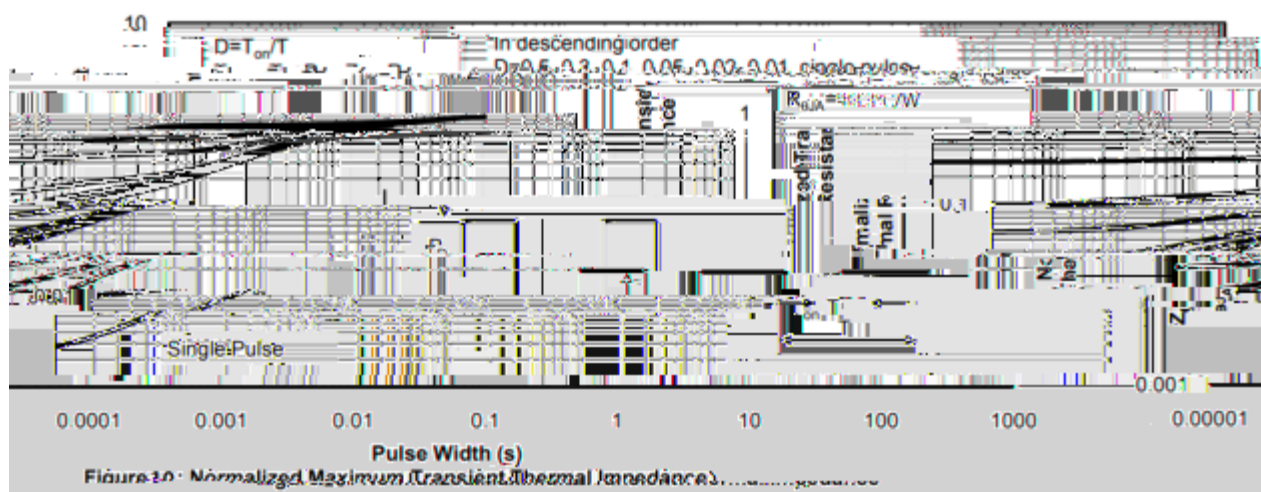
SZP 3P 沟槽 MOSFET 具有超低导通电阻、快速开关、低导通电压、符合 AEC-Q101 标准的高可靠性、HF 产品。

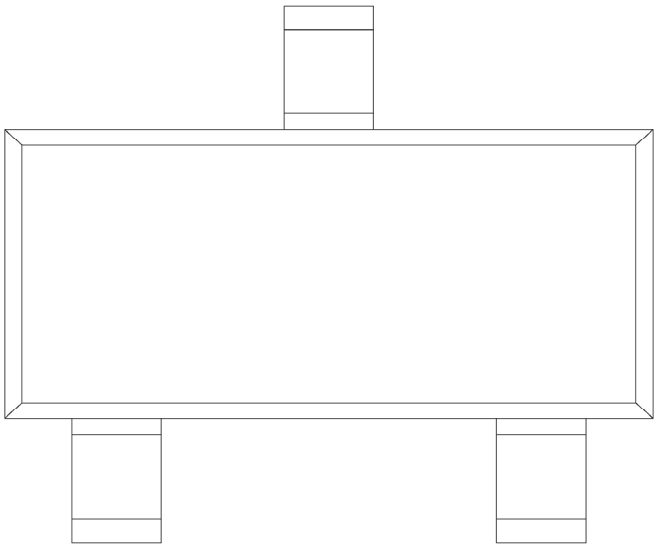
PWM application & Load switch, Meet the stringent requirements of automotive applications.

Parameter		Symbol	Rating	Unit
Drain–Source Voltage		V_{DS}	-60	V
Gate–Body Leakage Voltage		V_{GSS}	± 20	V
Drain Current - Continuous		I_D	-5	A
Pulsed Drain Current		I_{DM}	-18	A
Power Dissipation (Surface Mounted on FR4 Board, $t \leq 10$ sec.)		P_D	1.5	W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 150	
Maximum Junction-to-Ambient	$t \leq 10s$	$R_{\theta JA}$	118.6	/W
Maximum Junction-to-Ambient	Steady-State		161.6	/W
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	83.3	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-60	-63		V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1	-1.5	-2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-2A$		84	100	m Ω
		$V_{GS}=-4.5V$ $I_D=-1A$		103	125	m Ω
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60V$ $V_{GS}=0V$			-1.0	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=-20V$			-100	nA
		$V_{GS}=20V$			100	nA
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$ $T_J=25$			-1.2	V
Input Capacitance	C_{iss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0MHz$		885		pF
Output Capacitance	C_{oss}			90		
Reverse Transfer Capacitance	C_{rss}			64		
Total Gate Charge	$Q_g(-10V)$	$V_{DS}=-30V$ $V_{GS}=-10.0V$ $I_D=-5A$		25		nC
Total Gate Charge	$Q_g(-4.5V)$			9.6		
Gate-to-Source Charge	Q_{gs}			3		
Gate-to-Drain Charge	Q_{gd}			7		
Turn–On Delay Time	$t_{d(on)}$	$V_{DD}=-30V$ $V_{GS}=-10V$ $R_L=7.5\Omega$ $R_G=3\Omega$		8		ns
Turn–On Rise Time	t_r			4		
Turn–Off Delay Time	$t_{d(off)}$			32		
Turn–Off Fall Time	t_f			7		







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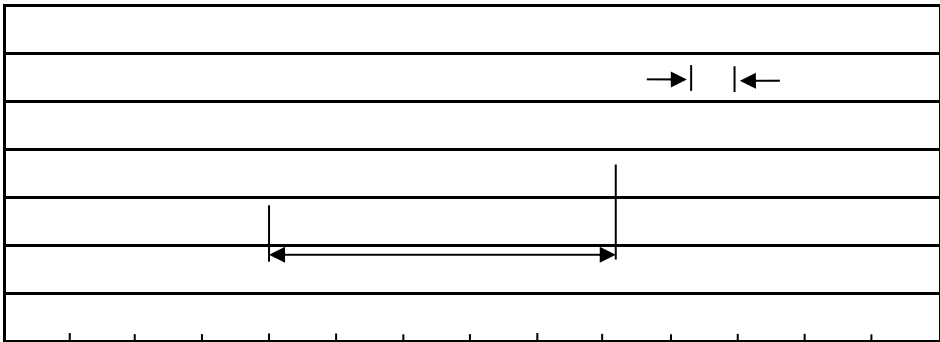
5P6 X ٨ ٣ N ٦

Note:

Q: Automobile halogen-free product Code

5P6: Product Type

Temperature Profile for IR Reflow Soldering(Pb-Free)



1. 150~200 ℃, Time: 60~120sec;

2. 255±5 ℃, Duration: 5±0.5sec;

3. Cooling Speed: 2~10 ℃/sec.
- Note:

1.Preheating:150~200 ℃ , Time:60~120sec.

2.Peak Temp.:255±5 ℃ , Duration:5±0.5sec.

3.Cooling Speed: 2~10 ℃ /sec.

150~200 ℃ 60~120 sec. Temp.:260±5 Time:10±1 sec

Units / 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