

SOT-23 M M Ł P Œ ħ ŵ Z 1

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

HjMũđĩ.ẦũHũồ.HjMũđĩa.Y.T.DHF0T434%ổỉ.ổỉđỉ.ổỉ.Fβ

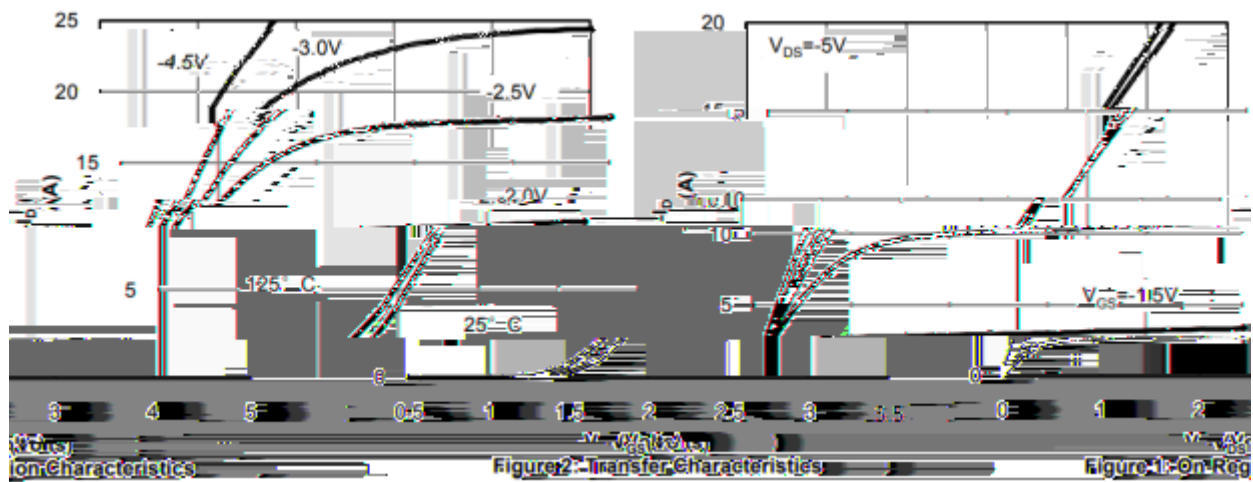
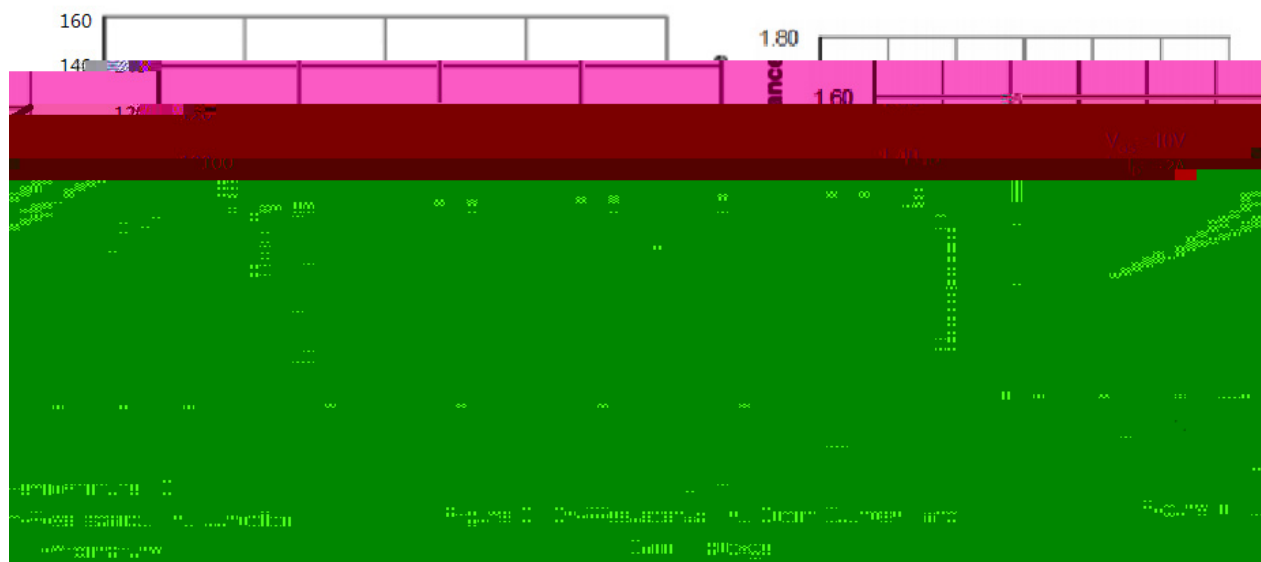
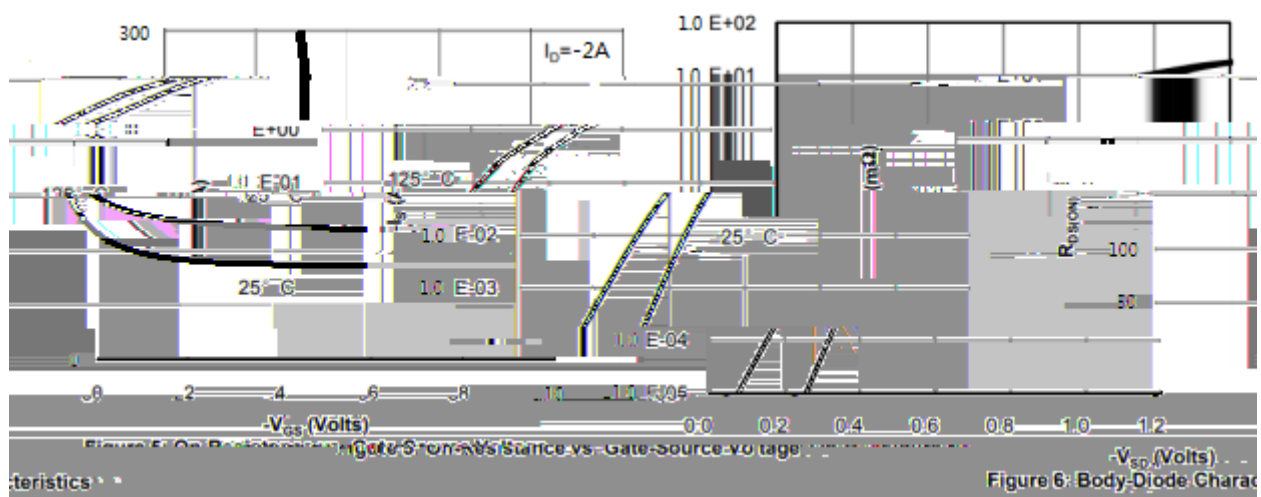
Ultra Low on-resistance. fast switching.Low on voltage, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

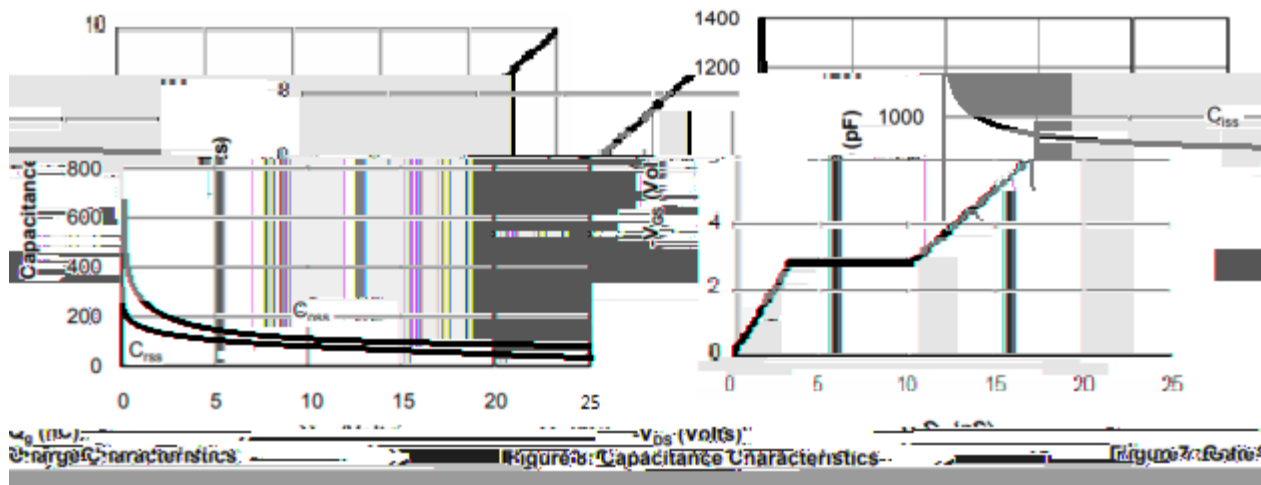
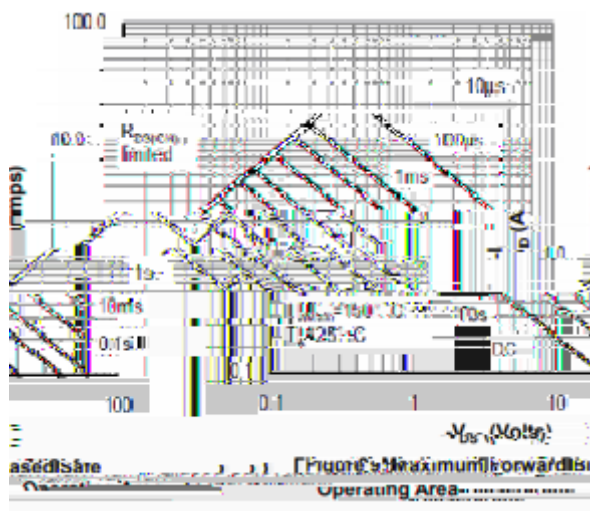
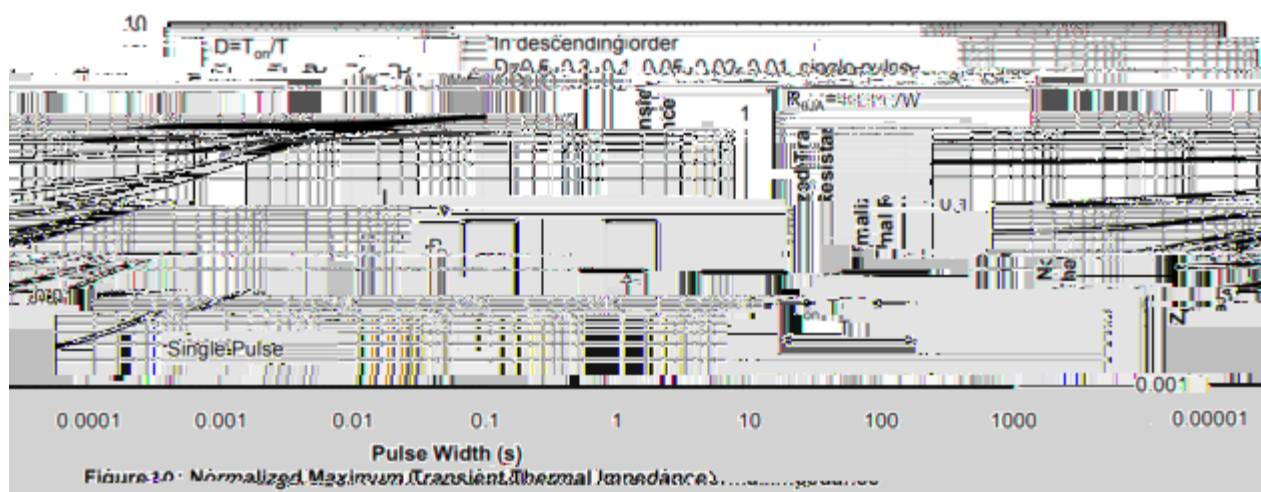
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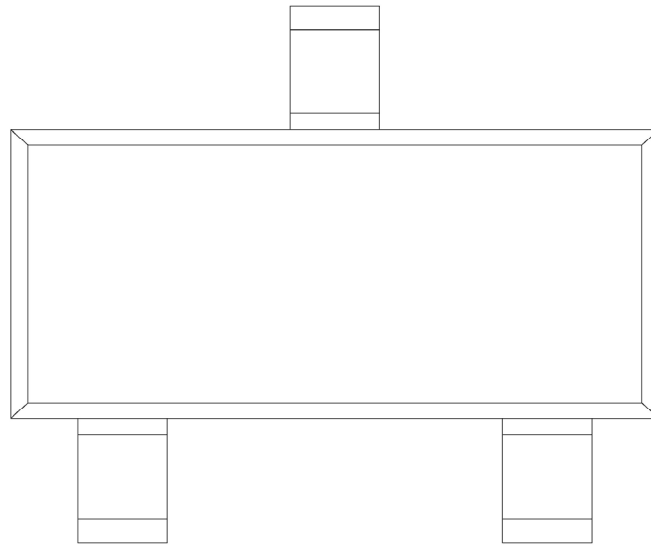
PWM application & Load switch, Meet the stringent requirements of automotive applications.

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		

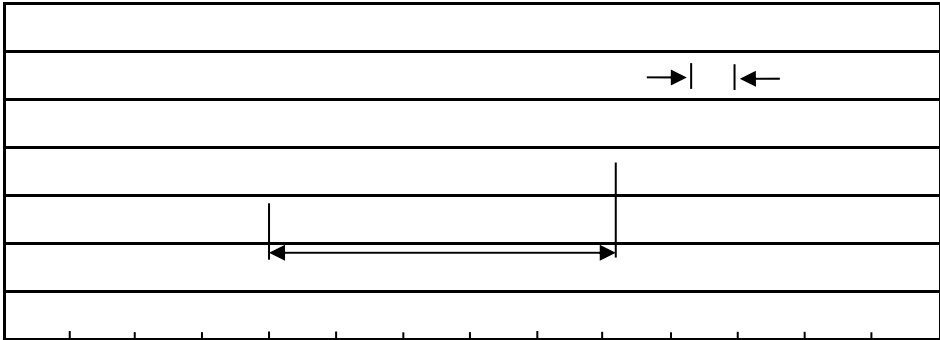






5P6: Product Type

Temperature Profile for IR Reflow Soldering(Pb-Free)



б " χ

- 1 ǀ 𐀀 𐀁 150 𐀂 200 𐀃 𐀄 𐀅 𐀆 60 𐀇 120sec;
- 2 Š ǂ 𐀁 255 ° 5 𐀃 𐀄 𐀅 𐀆 𐀇 𐀈 𐀉 5 ° 0.5sec;
- 3 𐀊 𐀋 𐀌 𐀍 𐀎 𐀏 𐀐 𐀑 𐀒 2 𐀓 10 𐀔 /sec.

Note:

- 1.Preheating:150~200 𐀃 , Time:60~120sec.
- 2.Peak Temp.:255 ° 5 𐀃 , Duration:5 ° 0.5sec.
- 3.Cooling Speed: 2~10 𐀃 /sec.

𐀁 𐀂 χ 260 ° 5 𐀃 𐀄 𐀅 χ 10 ° 1 sec.

Temp.:260±5

Time:10±1 sec

𐀁 𐀂 𐀃 / 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