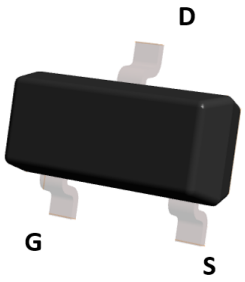
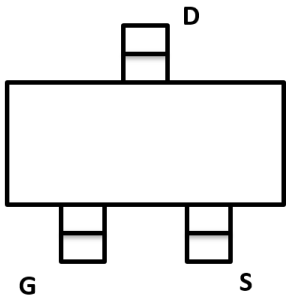
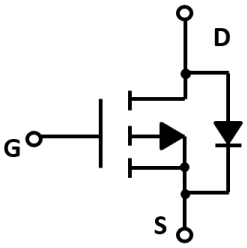
P-Channel Enhancement Mode Field Effect Transistor



Top View





SOT-23

Product Summary

- V_{DS} -40V
- I_D -4.4A
- $R_{DS(ON)}$(at V_{GS}=-10V) ＜90mohm
- $R_{DS(ON)}$(at V_{GS}=-4.5V) ＜150mohm

General Description

- Trench Power LV MOSFET technology
- High density cell design for Low $R_{DS(ON)}$
- High Speed switching

■ Absolute Maximum Ratings (T_A=25℃unless otherwise noted)

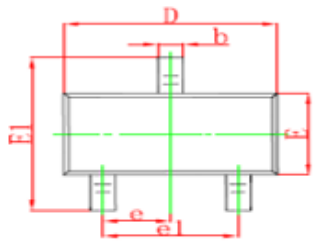
Parameter	Symbol	Maximum	Unit
Drain-source Voltage	V_{DS}	-40	V
Gate-source Voltage	V_{GS}	±20	V
Drain Current	I_D	-4.4	A
Pulsed Drain Current [A]	I_{DM}	-15	A
Total Power Dissipation @ T_A=25℃	P_D	1.5	W
Thermal Resistance Junction-to-Ambient [B]	$R_{\theta JA}$	82	℃/ W
Junction and Storage Temperature Range	T_J ,T_{STG}	-55～+150	℃

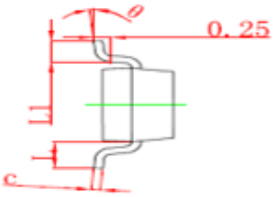
■ Electrical Characteristics (T_J=25℃ unless otherwise noted)

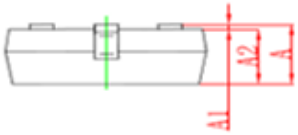
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=-250μA	-40			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-32V,V_{GS}=0V,T_C=25℃			-1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=-250μA	-1.0	-1.9	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}= -10V, I_D=-2.0A			90	mΩ
		V_{GS}= -4.5V, I_D=-1.0A			150	
Diode Forward Voltage	V_{SD}	I_S=-2.5A,V_{GS}=0V		-0.8	-1.2	V
Maximum Body-Diode Continuous Current	I_S				-2.0	A
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=-30V,V_{GS}=0V,f=1MHZ		553		pF
Output Capacitance	C_{oss}			29		
Reverse Transfer Capacitance	C_{rss}			20		
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=-10V,V_{DS}=-30V,I_D=-1.0A		4.3		nC
Gate Source Charge	Q_{gs}			1.1		
Gate Drain Charge	Q_{gd}			1.5		
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=-10V,V_{DD}=-50V, I_D=-1A, R_{GEN}=2.5Ω		12		ns
Turn-on Rise Time	t_r			6.8		
Turn-off Delay Time	$t_{D(off)}$			33		
Turn-off Fall Time	t_f			3		

A. Pulse Test: Pulse Width≤300us,Duty cycle ≤2%.
B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

■ SOT-23 Package information

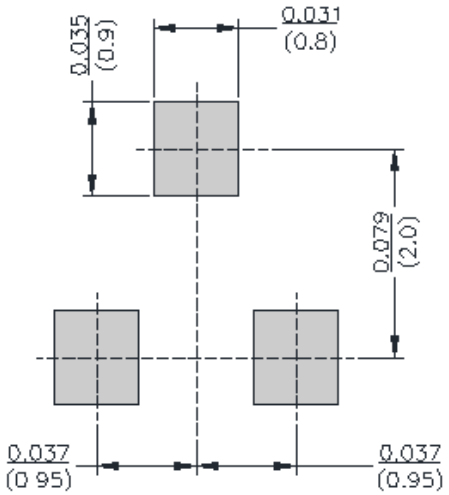






Symbol	Dimentions in Millimeter		Dimentions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950Type		0.037Type	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.220REF	
L1	0.300	0.500	0.012	0.020
θ	0 °	8 °	0 °	8 °

■ SOT-23 Suggested Pad Layout



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by SLKORMICRO ***manufacturer:***

Other Similar products are found below :

614233C 648584F MCH3443-TL-E MCH6422-TL-E NTNS3A92PZT5G IRFD120 IRFF430 JANTX2N5237 2N7000 AOD464 2SK2267(Q) 2SK2545(Q,T) 405094E 423220D MIC4420CM-TR VN1206L 614234A 715780A SSM6J414TU,LF(T 751625C IPS70R2K0CEAKMA1 BSF024N03LT3 G PSMN4R2-30MLD TK31J60W5,S1VQ(O 2SK2614(TE16L1,Q) DMN1017UCP3-7 EFC2J004NUZTDG FCAB21350L1 P85W28HP2F-7071 DMN1053UCP4-7 NTE2384 NTE2969 NTE6400A DMC2700UDMQ-7 DMN2080UCB4-7 DMN61D9UWQ-13 US6M2GTR DMN31D5UDJ-7 SSM6P54TU,LF DMP22D4UFO-7B IPS60R3K4CEAKMA1 DMN1006UCA6-7 DMN16M9UCA6-7 STF5N65M6 IRF40H233XTMA1 IPSA70R950CEAKMA1 IPSA70R2K0CEAKMA1 STU5N65M6 C3M0021120D DMN6022SSD-13