

Features

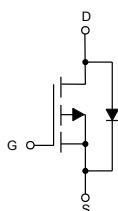
- TrenchFET Power MOSFET
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 114°C/W Junction to Ambient^(Note 1)

Parameter	Symbol	Rating	Unit
Drain -source Voltage	V_{DS}	-30	V
Gate -Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-2.7	A
Continuous Source-Drain Diode Current	I_S	-0.91	A
Power Dissipation	P_D	1.1	W

Internal Structure

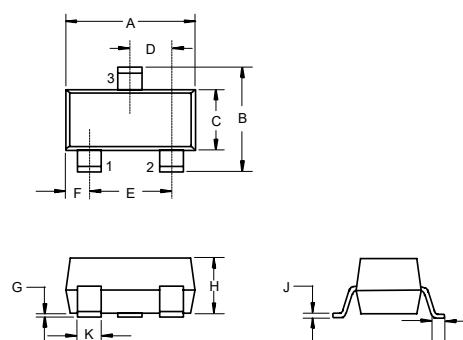


1. GATE
2. SOURCE
3. DRAIN

Marking:S7

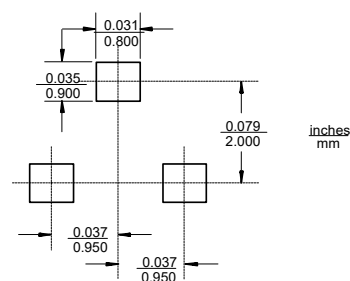
P-Channel MOSFET

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250μA	-30			V
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1.0		-3.0	V
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V,V _{GS} =0V,T _J =55°C			-10	
Drain-Source On-Resistance ^(Note 2)	R _{DS(on)}	V _{GS} =-4.5V, I _D =-2.5A		110	138	mΩ
		V _{GS} =-10V, I _D =-3.5A		73	88	
Forward Tranconductance ^(Note 2)	g _{FS}	V _{DS} =-10V, I _D =-3.5A		7		S
Dynamic Characteristics ^(Note 3)						
Input Capacitance	C _{iss}	V _{DS} =-15V,V _{GS} =0V, f=1MHz		340		pF
Output Capacitance	C _{oss}			67		
Reverse Transfer Capacitance	C _{rss}			51		
Total Gate Charge	Qg	V _{DS} =-15V,V _{GS} =-4.5V,I _D =-2.5A		4.1	6.2	nC
Gate-Source Chage	Qgs			1.3		
Gage-Drain Charge	Qgd			1.8		
Gate Resistance	Rg	f=1MHz		10		Ω
Turn-On Delay Time	t _{d(on)}	V _{DD} =-15V,V _{GEN} =-4.5V,R _L =15Ω, I _D =-1A,R _G =1Ω		40	60	ns
Turn-On Rise Time	t _r			40	60	
Turn-Off Delay Time	t _{d(off)}			20	40	
Turn-Off Fall Time	t _f			17	30	
Drain-Source Body Diode Characteristics						
Body Diode Voltage	V _{SD}	I _S =-0.75A,V _{GS} =0		-0.8	-1.2	V

Note :

1. Surface Mounted on 1" x1" FR4 Board.
2. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
3. Guaranteed by Design, Not Subject to Production Testing.

Curve Characteristics

Fig. 1 - Output Characteristics

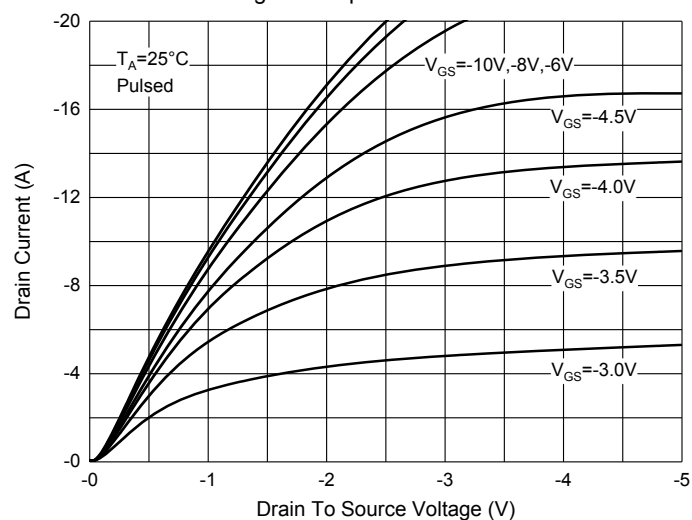


Fig. 2 - Transfer Characteristics

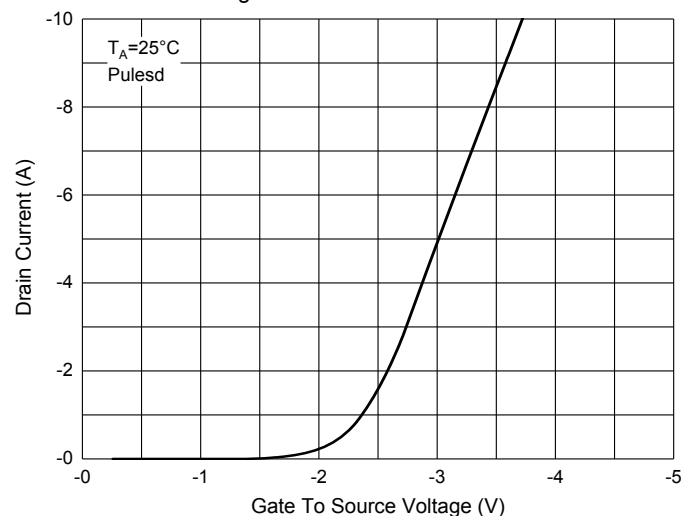


Fig. 3 - $R_{DS(ON)} - I_D$

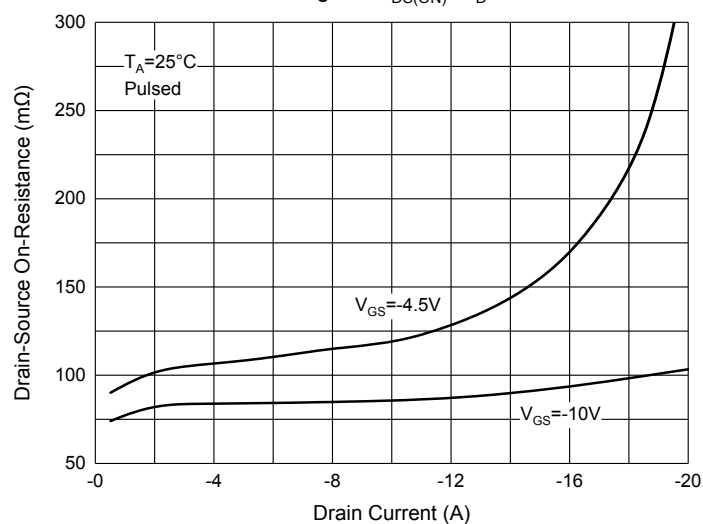


Fig. 4 - $R_{DS(ON)} - V_{GS}$

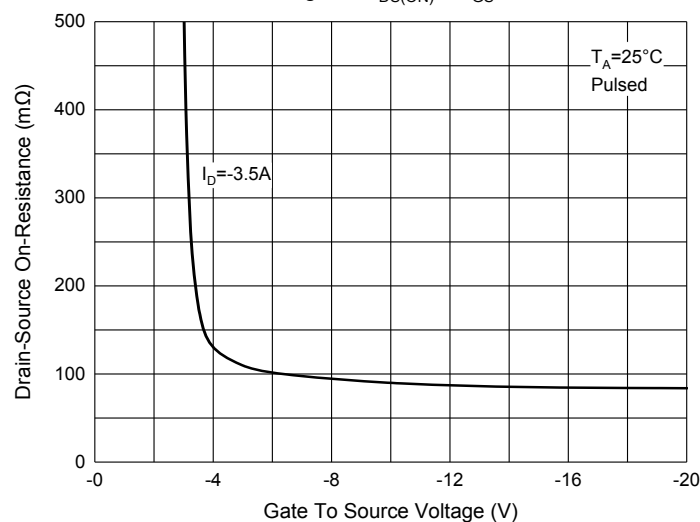
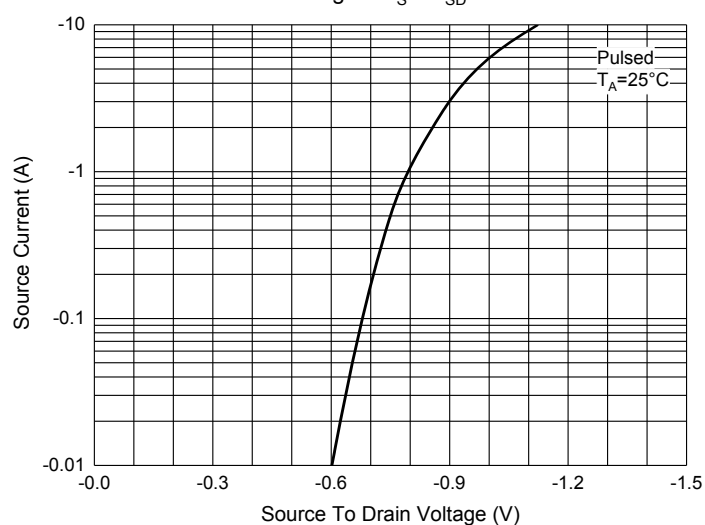


Fig. 5 - $I_S - V_{SD}$



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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