

Features

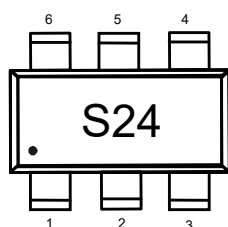
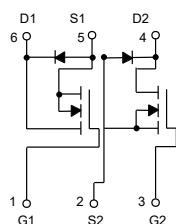
- TrenchFET Power MOSFET
- Low $R_{DS(ON)}$
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 85°C/W Junction to Ambient

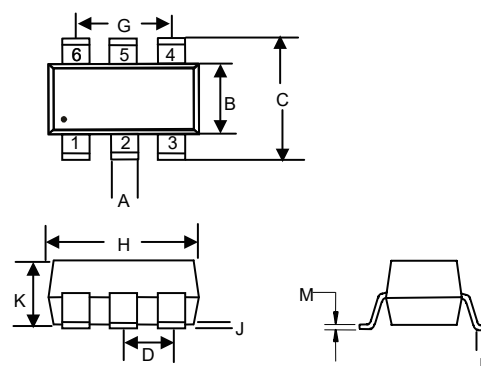
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	2.0	A
Power Dissipation	P_D	1.5	W

Internal Structure and Marking Code



N-Channel MOSFET

SOT23-6L



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.012	0.020	0.30	0.50	
B	0.051	0.070	1.30	1.80	
C	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
H	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	

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	100			V
Gate-Threshold Voltage ^(Note1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1.0	1.5	2.0	V
Gate-Body Leakage Current	I _{GSS}	V _{GS} =± 20V, V _{DS} =0V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
Drain-Source On-Resistance ^(Note1)	R _{DS(on)}	V _{GS} =10V, I _D =2.0A		250	280	mΩ
		V _{GS} =4.5V, I _D =2.0A		260	300	
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =2.0A	2.0			S
Dynamic Characteristics ^(Note2)						
Input Capacitance	C _{iss}	V _{DS} =15V, V _{GS} =0V, f=1MHz		520		pF
Output Capacitance	C _{oss}			130		
Reverse Transfer Capacitance	C _{rss}			36		
Switching Characteristics ^(Note2)						
Turn-On Delay Time	t _{d(on)}	V _{DD} =10V, R _L =2.8Ω, V _{GS} =4.5V, I _D =1A, R _{GEN} =6Ω		12		ns
Turn-On Rise Time	t _r			52		
Turn-Off Delay Time	t _{d(off)}			17		
Turn-Off Fall Time	t _f			10		
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =2A		4.8		nC
Gate-Source Charge	Q _{gs}			1.2		
Turn-Off Fall Time	Q _{gd}			1.7		
Source-Drain Diode characteristics						
Drain-Source Diode Forward Current	I _s				2.0	A
Diode Forward voltage	V _{SD}	V _{GS} =0V, I _S =2A		0.9	1.2	V

Notes:

1. Pulse Test: Pulse Width $\leq 300\mu A$, Duty Cycle $\leq 2\%$.

2. These parameters have no way to verify.

Curve Characteristics

Fig. 1 - Output Characteristics

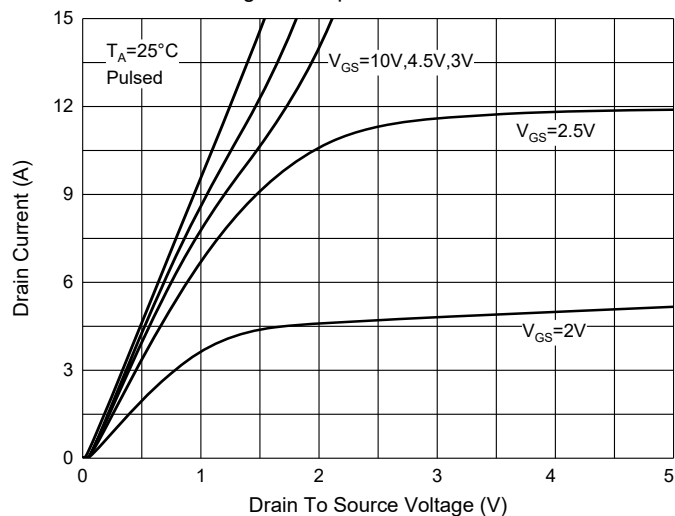


Fig. 2 - Transfer Characteristics

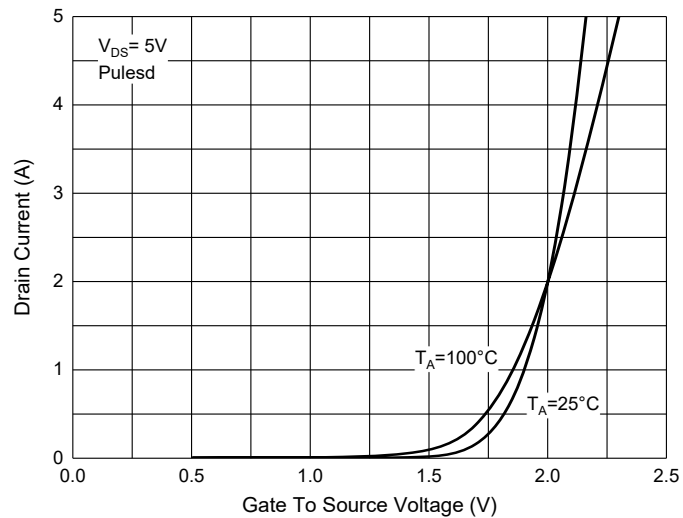


Fig. 3 - $I_S - V_{SD}$

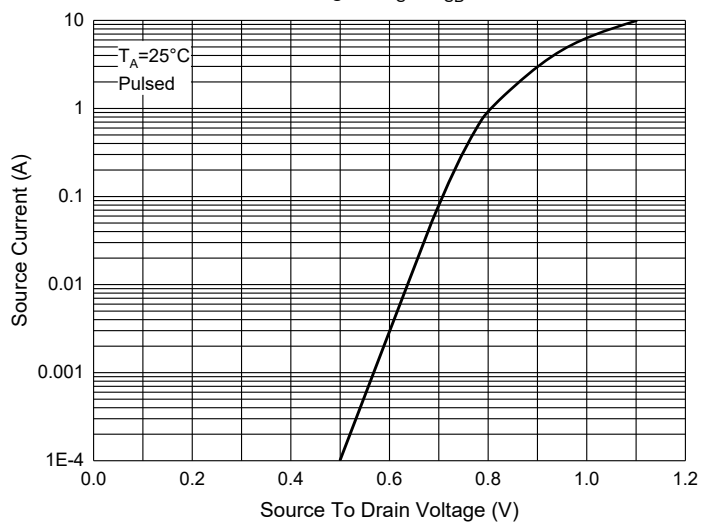
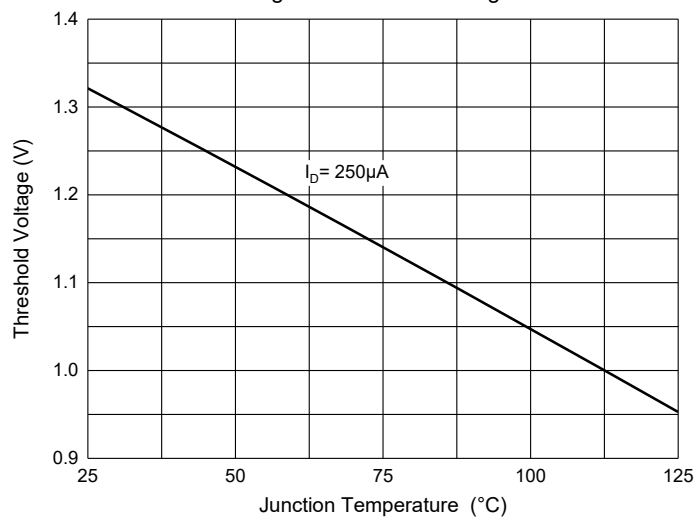


Fig. 4 - Threshold Voltage



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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