

Features

- TrenchFET Power MOSFET
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

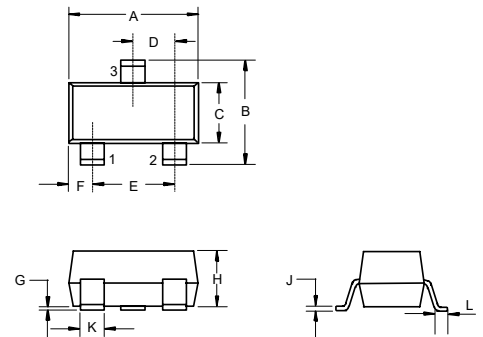
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 162°C/W Junction to Ambient^(2,3)

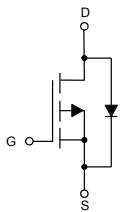
Parameter	Symbol	Rating	Unit
Drain -source Voltage	V_{DS}	-100	V
Gate -Source Voltage	V_{GS}	±20	V
Continuous Drain Current ^(2,3)	I_D	-1	A
Continuous Source-Drain Diode Current	I_S	-1	A
Power Dissipation	P_D	0.77	W

P-Channel MOSFET

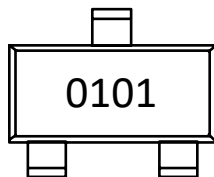
SOT-23



Internal Structure and Marking Code

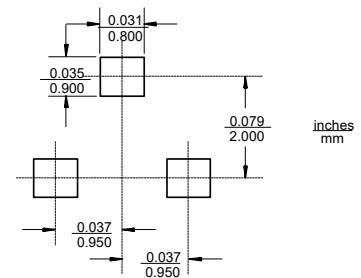


1. GATE
2. SOURCE
3. DRAIN



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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



MOSFET ELECTRICAL CHARACTERISTICS(T_A = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-100			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -100V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
On Characteristics⁽⁴⁾						
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.5	-2.2	-3.0	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} = -10V, I _D = -1.0A		580	800	mΩ
		V _{GS} = -4.5V, I _D = -0.5A		650	1000	
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} = -40V, V _{GS} = 0V, f = 1MHz		388		pF
Output Capacitance	C _{oss}			19		
Reverse Transfer Capacitance	C _{rss}			15		
Switching Characteristics						
Total Gate Charge	Q _g	V _{DS} = -10V, V _{GS} = -10V, I _D = -1A		3.2		nC
Gate-Source Charge	Q _{gs}			0.5		
Gate-Drain Charge	Q _{gd}			1.1		
Turn-on delay time	t _{d(on)}	V _{DD} = -10V, V _G = -10V, I _D = -1A R _G = 2.5Ω		10		ns
Turn-on rise time	t _r			32		
Turn-off delay time	t _{d(off)}			28		
Turn-off fall time	t _f			9		
Diode Characteristics						
Diode forward current	I _S	T _A = 25°C			-1	A
Diode pulsed forward current	I _{SM}				-4	A
Diode Forward voltage	V _{DS}	V _{GS} = 0V, I _S = -1A			-1.2	V

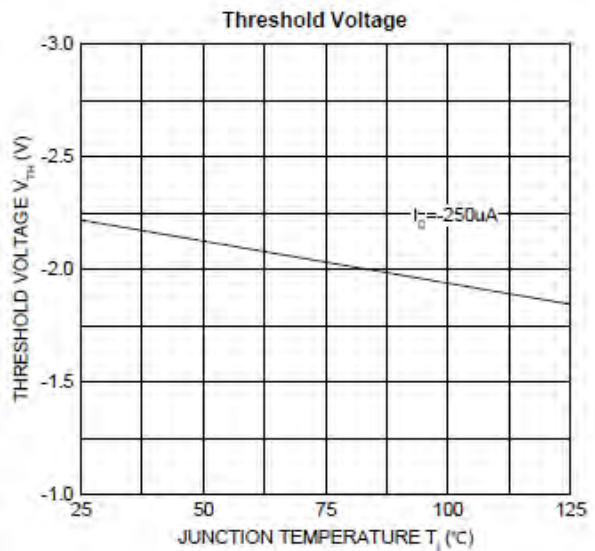
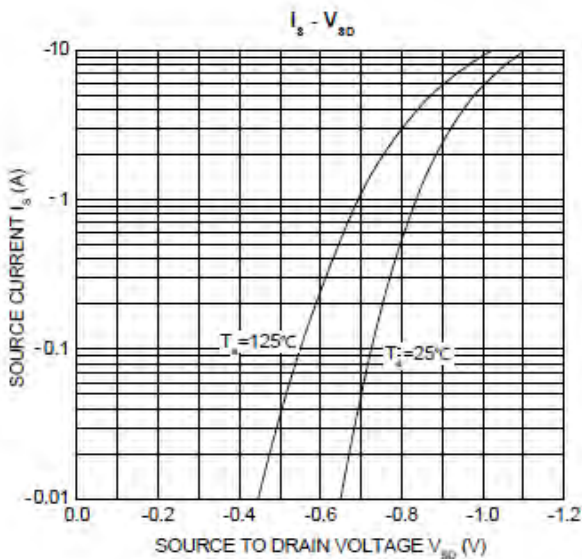
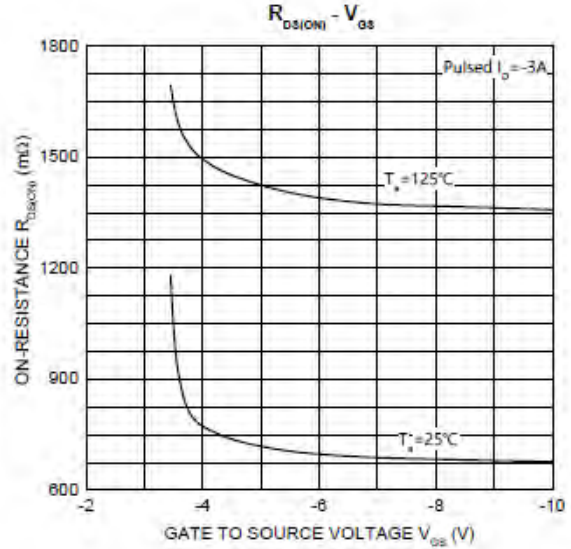
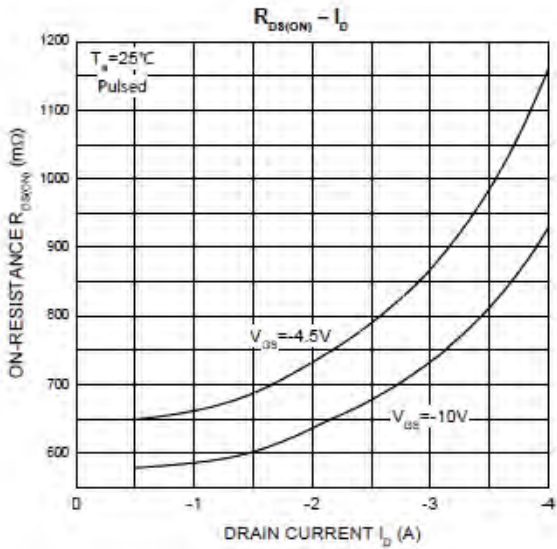
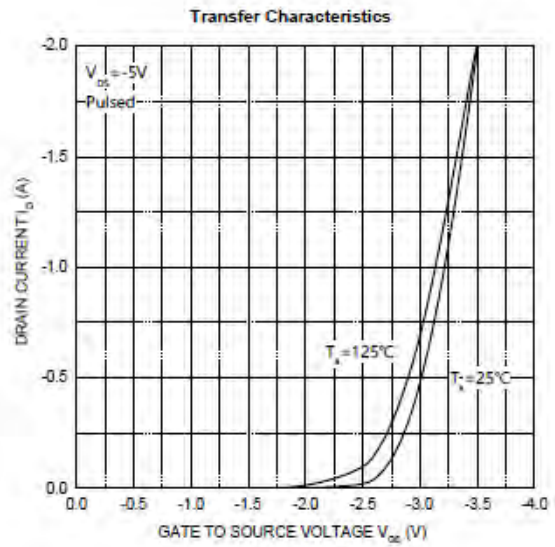
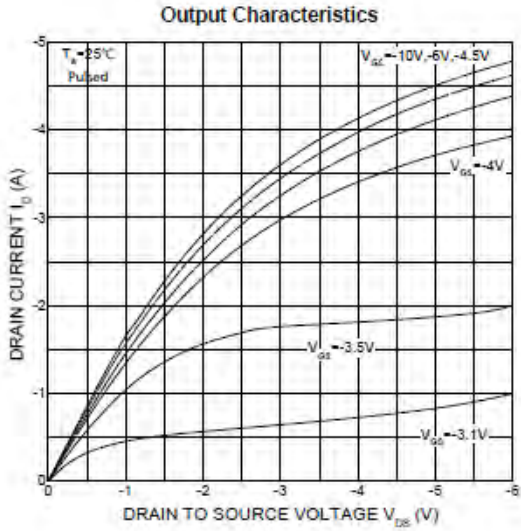
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. R_{θJA} is measured with the device mounted on 1 in² FR4 board with 1oz. single side copper, in a still air environment with T_A = 25°C.

3. R_{θJA} is measured in the steady state

4. Pulse test : Pulse width ≤ 380μs, duty cycle ≤ 2%.

Curve Characteristics



Ordering Information

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

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