

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)

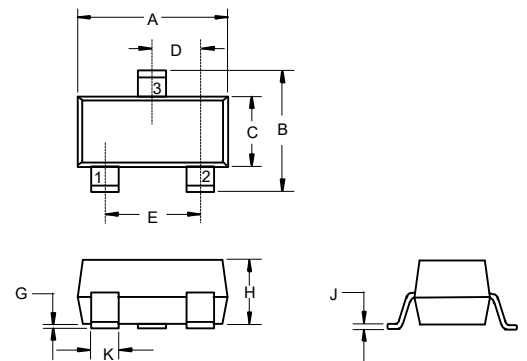
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 150°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	-3	A
Continuous Source-Drain Diode Current	I_S	-3	A
Power Dissipation	P_D	0.83	W

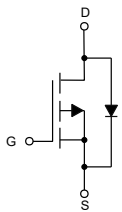
P-Channel MOSFET

SOT-23-3L

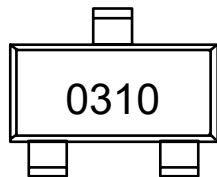


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.113	0.117	2.87	2.97	
B	0.108	0.112	2.75	2.85	
C	0.061	0.065	1.55	1.65	
D	0.036	0.038	0.914	0.965	
E	0.073	0.077	1.85	1.95	
G	0.0016	0.0039	0.04	0.100	
H	0.041	0.045	1.05	1.15	
J	0.006	0.007	0.14	0.17	
K	0.012	0.020	0.30	0.50	

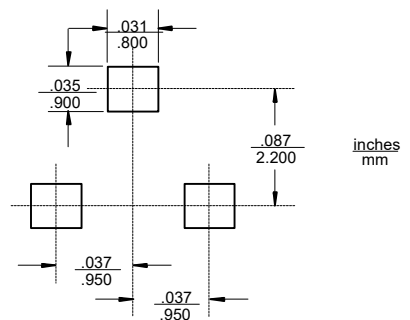
Internal Structure and Marking Code



1. GATE
2. SOURCE
3. DRAIN



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	-1.1	-1.6	-2.0	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} = -10V, I _D = -1.0A		239	286	mΩ
		V _{GS} = -4.5V, I _D = -0.5A		258	335	
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} = -50V, V _{GS} = 0V, f = 1MHz		1010		pF
Output Capacitance	C _{oss}			26		
Reverse Transfer Capacitance	C _{rss}			27		
Switching Characteristics						
Total Gate Charge	Q _g	V _{DS} = -50V, V _{GS} = -10V, I _D = -1A		19		nC
Gate-Source Charge	Q _{gs}			4.6		
Gate-Drain Charge	Q _{gd}			1.8		
Turn-on delay time	t _{d(on)}	V _{DD} = -50V, V _G = -10V, I _D = -1A R _G = 3.9Ω		5.8		ns
Turn-on rise time	t _r			2.8		
Turn-off delay time	t _{d(off)}			28		
Turn-off fall time	t _f			18		
Diode Characteristics						
Reverse Recovery Time	t _{rr}	I _F = -1A, di/dt = 100A/μs		21		ns
Reverse Recovery Charge	Q _{rr}			18		nC
Diode Forward voltage	V _{DS}	V _{GS} = 0V, I _S = -1A			-1.3	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

Fig. 1 - Typical Output Characteristics

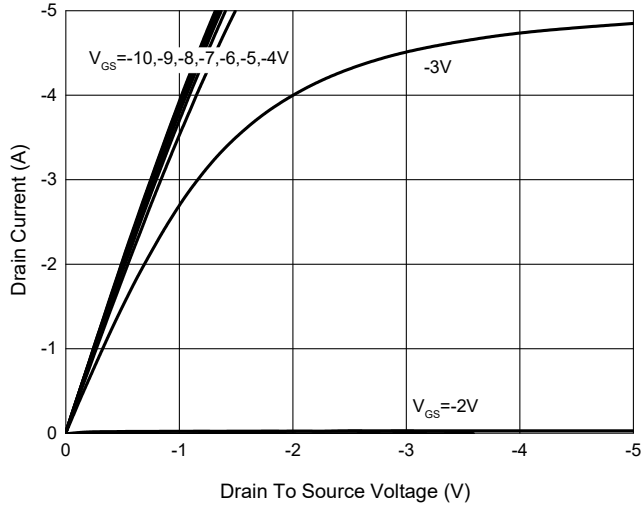


Fig. 2 - Transfer Characteristics

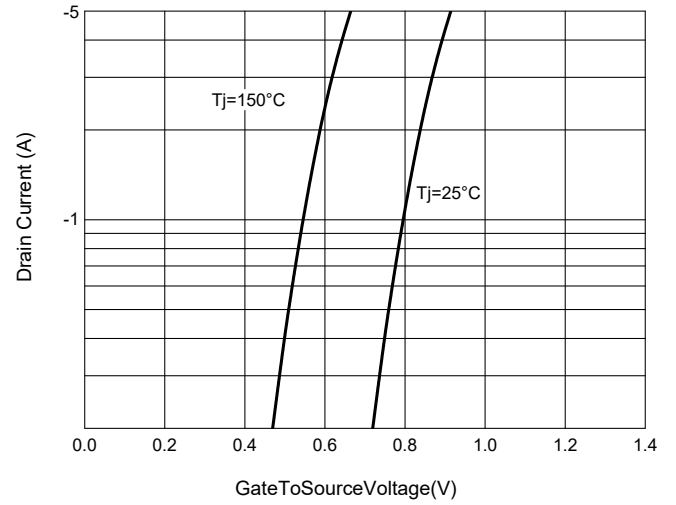


Fig. 3 - $R_{DS(ON)} - I_D$

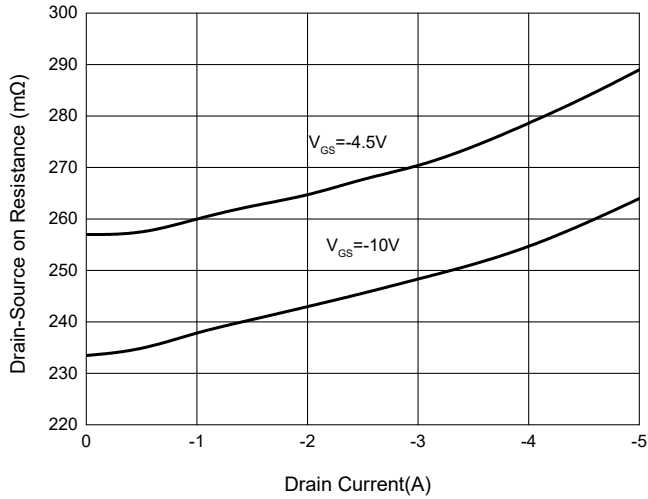


Fig. 4 - Normalized On Resistance Characteristics

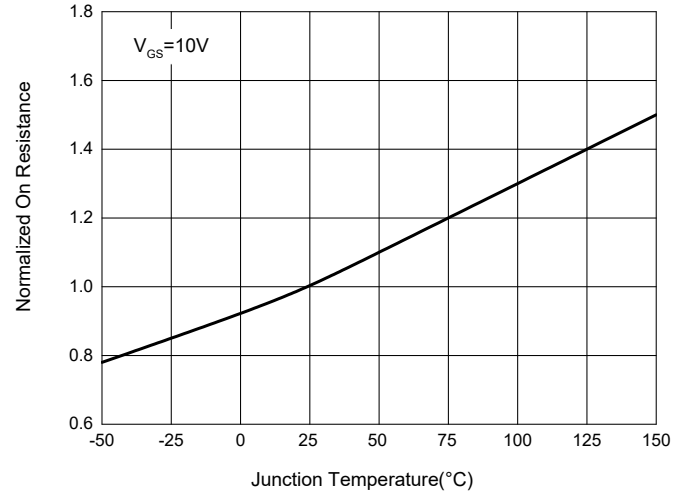


Fig. 5 - Gate Charge

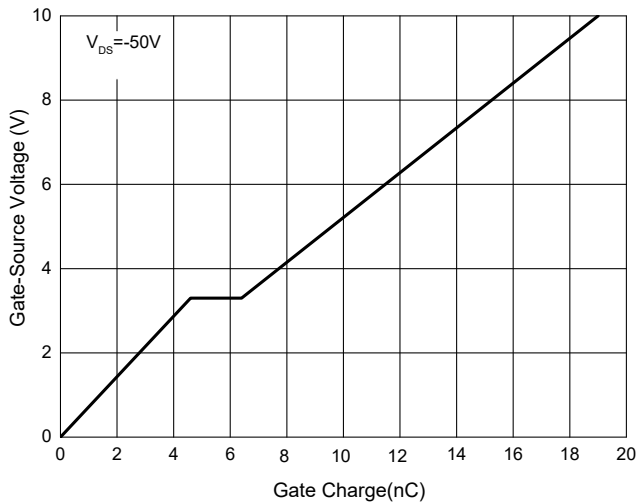
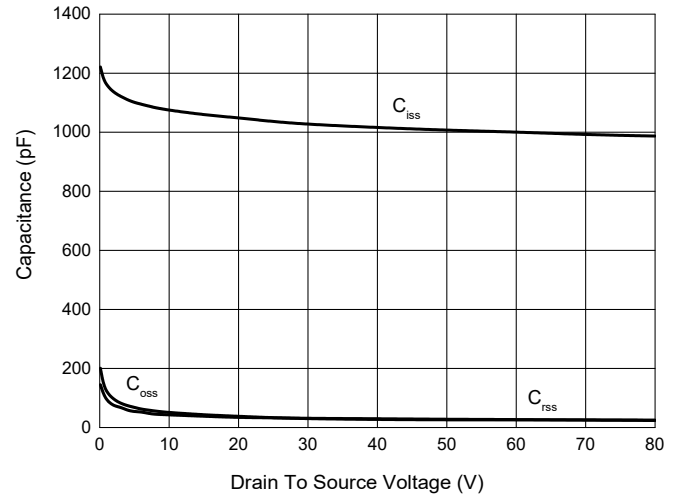


Fig. 6 - Capacitance Characteristics



Ordering Information

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

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