

#### **Features**

- · 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

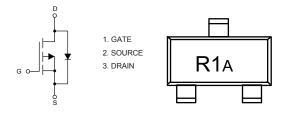
Storage Temperature Range: -55°C to +150°C

• Thermal Resistance: 83°C/W Junction to Ambient

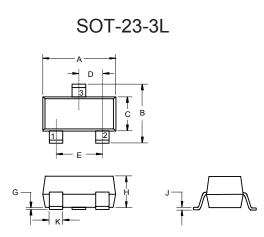
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V <sub>DS</sub>	-30	V
Gate-Source Volltage	V <sub>GS</sub>	±12	V
Continuous Drain Current	I <sub>D</sub>	-4.4	Α
Total Power Dissipation	$P_{D}$	1.5	W

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

# **Internal Structure and Marking Code**

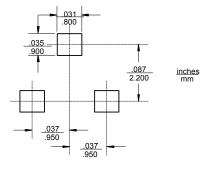


# P-CHANNEL MOSFET



DIMENSIONS					
DIM INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOTE
Α	0.113	0.117	2.87	2.97	
В	0.108	0.112	2.75	2.85	
С	0.061	0.065	1.55	1.65	
D	0.036	0.038	0.914	0.965	
Е	0.073	0.077	1.85	1.95	
G	0.0016	0.0039	0.04	0.100	
Η	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	

#### Suggested Solder Pad Layout





# Electrical Characteristics @ 25°C (Unless Otherwise Specified)

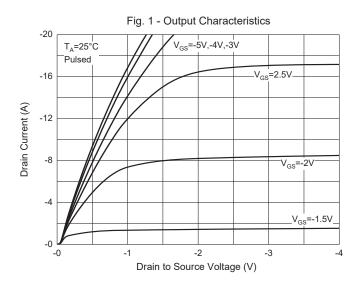
Parameter	Symbol	Test Conditions	Min	Тур	Max	Unit	
Static Characteristics							
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =-250μA	-30			V	
Gate-Source Leakage Current	I GSS	V <sub>DS</sub> =0V, V <sub>GS</sub> =±12V			±100	nA	
Zero Gate Voltage Drain Current	DSS	V <sub>DS</sub> =-24V, V <sub>GS</sub> =0V			-1	μΑ	
Gate-Threshold Voltage	V GS(th)	$V_{DS}=V_{GS}$ , $I_{D}=-250\mu A$	-0.7		-1.3	V	
		V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.2A		41	60		
Drain-Source On-Resistance <sup>(Note 2)</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-4.0A		47	70	mΩ	
		V <sub>GS</sub> =-2.5V, I <sub>D</sub> =-1.0A		61	85		
Diode Forward Voltage (Note 2)	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =-1A			-1	V	
Forward Tranconductance <sup>(Note 2)</sup>	g <sub>FS</sub>	V <sub>DS</sub> =-5V, I <sub>D</sub> =-5A	7.0			S	
Dynamic Characteristics <sup>(Note 3)</sup>							
Input Capacitance	C <sub>iss</sub>			1050		pF	
Output Capacitance	Coss	V <sub>DS</sub> =-15V,V <sub>GS</sub> =0V, f=1MHz		127			
Reverse Transfer Capacitance	Crss			85			
Turn-On Delay Time	t d(on)			6.5			
Turn-On Rise Time	t <sub>r</sub>	V <sub>GS</sub> =-10V,V <sub>DS</sub> =-15V,		3.5		ns	
Turn-Off Delay Time	t d(off)	$R_L=3.6\Omega, R_{GEN}=6\Omega$		40			
Turn-Off Fall Time	t <sub>f</sub>	1		13			
Total Gate Charge	Qg			22			
Gate-Source Charge	Qgs	V <sub>GS</sub> =-10V,V <sub>DS</sub> =-1 5V,I <sub>D</sub> =-4.4A 3.28		3.28		nC	
Gate-Drain Charge	Qgd			2.11			

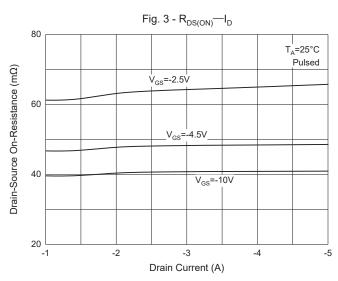
Note 2. Pulse Test : Pulse Width  $\leq$ 300µs, Duty Cycle  $\leq$ 2%.

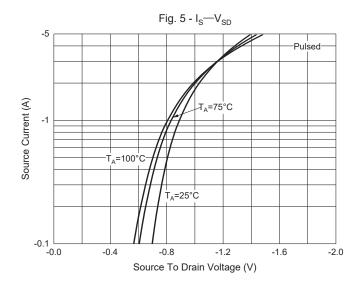
<sup>3.</sup> These parameters have no way to verify.

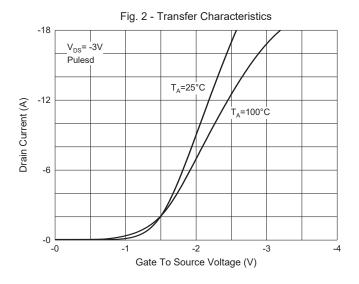


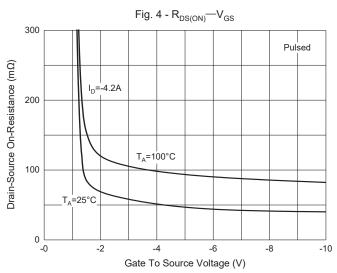
## **Curve Characteristics**

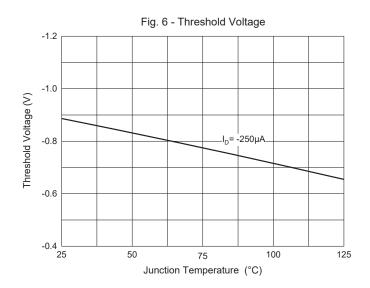














## **Ordering Information**

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

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