

**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)

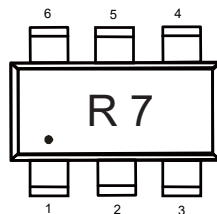
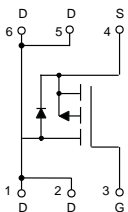
**Maximum Ratings**

- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 78°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	-4.1	A
Pulsed drain current	$I_{DM}$	-16	A
Total Power Dissipation <sup>(Note 2)</sup>	$P_D$	1.6	W

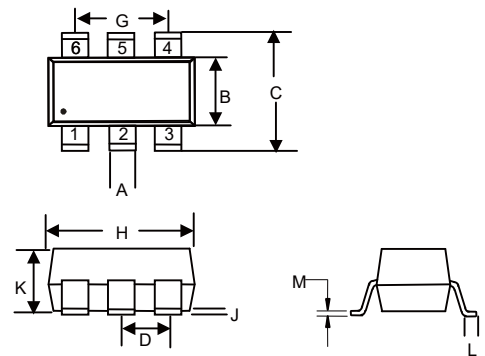
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Device Mounted on FR-4 Substrate PC Board, 2oz Copper, with 1inch<sup>2</sup> Copper plate.

**Internal Structure and Marking Code**



**P-CHANNEL  
MOSFET**

**SOT23-6L**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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	2.50	3.10	
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 @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate-Source Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-24V, V_{GS}=0V$			-1	$\mu A$
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	-1	-1.4	-3	V
Drain-Source On-Resistance <sup>(Note 2)</sup>	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4.1A$			50	m $\Omega$
		$V_{GS}=-4.5V, I_D=-3A$			70	
Diode Forward Voltage <sup>(Note 2)</sup>	$V_{SD}$	$V_{GS}=0V, I_S=-1A$			-1.2	V
Forward transconductance <sup>(Note 2)</sup>	$g_{FS}$	$V_{DS}=-5V, I_D=-4A$	5.5			S
<b>Dynamic Characteristics<sup>(Note 3)</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$		700		pF
Output Capacitance	$C_{oss}$			120		
Reverse Transfer Capacitance	$C_{rss}$			75		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V, V_{DS}=-15V,$ $R_L=3.6\Omega, R_{GEN}=3\Omega$		8.6		ns
Turn-On Rise Time	$t_r$			5		
Turn-Off Delay Time	$t_{d(off)}$			28.2		
Turn-Off Fall Time	$t_f$			13.5		

Note 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

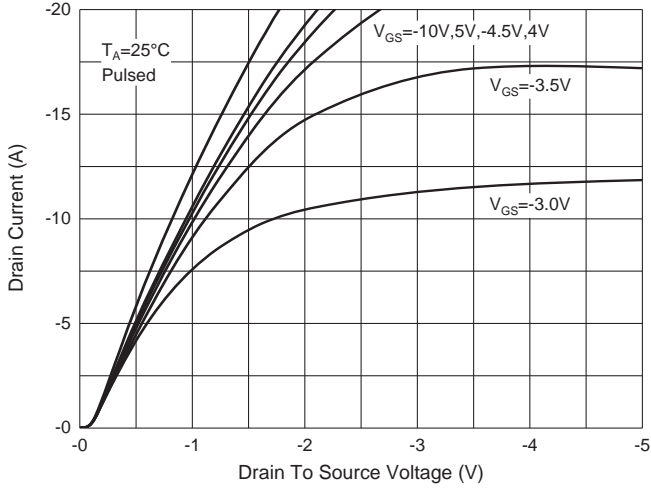


Fig. 2 - Transfer Characteristics

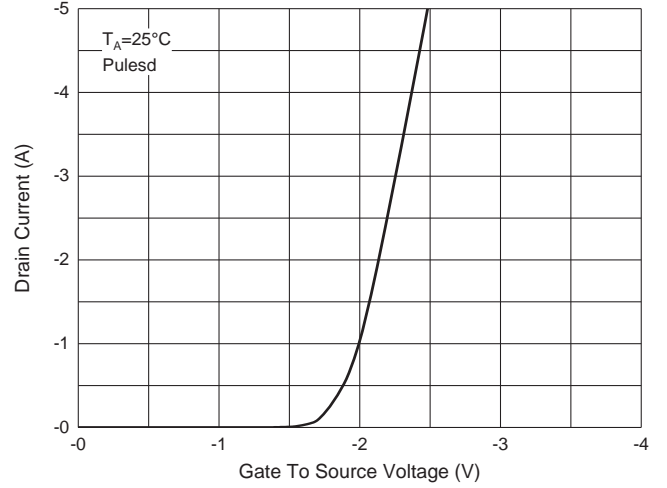


Fig. 3 -  $R_{DS(ON)} - I_D$

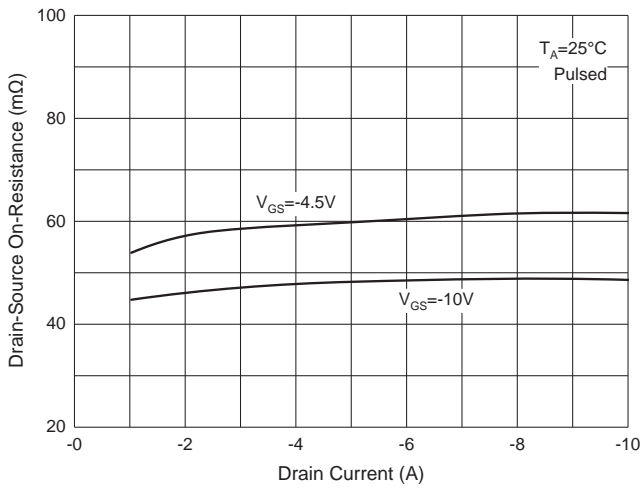


Fig. 4 -  $R_{DS(ON)} - V_{GS}$

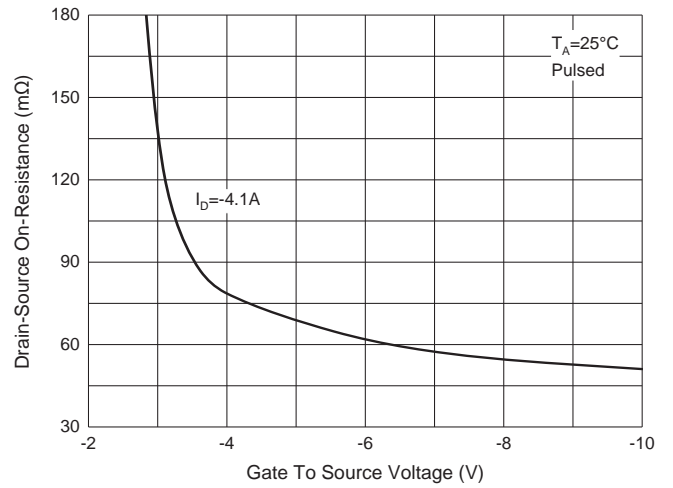
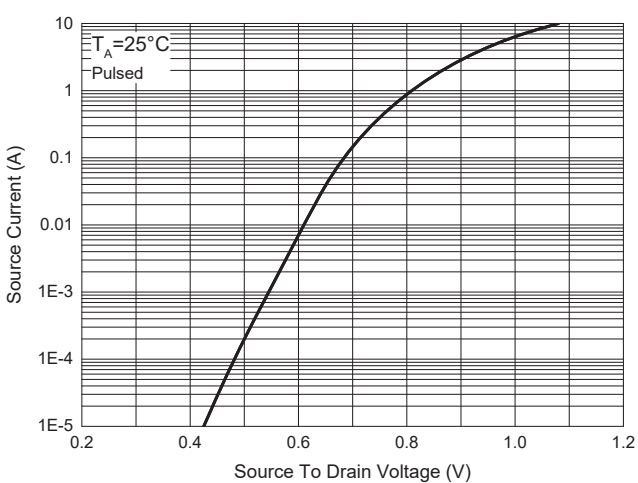


Fig. 5 -  $I_S - V_{SD}$



## Ordering Information

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

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