

Features

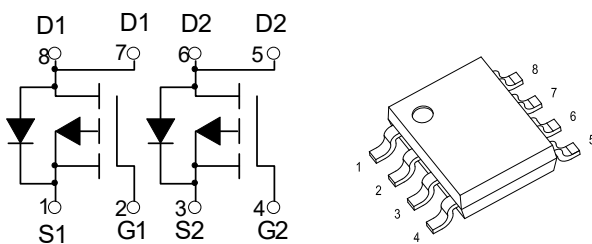
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"

Maximum Ratings

- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 50°C/W Junction to Ambient^(Note 1)

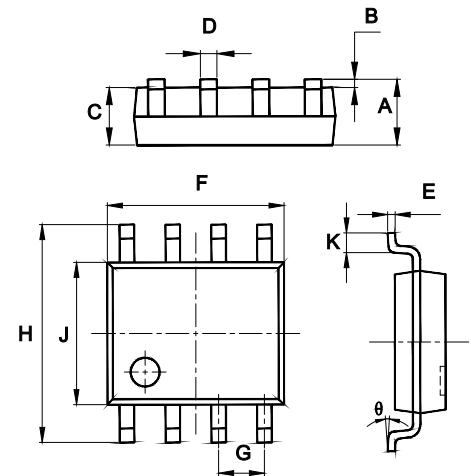
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-5.0	A
Total Power Dissipation	P_D	2.5	W

Internal Structure:



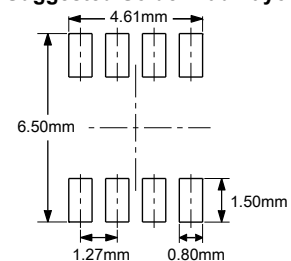
**Dual
P-Channel
Power MOSFET**

SOP-8



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.053	0.069	1.35	1.75	
B	0.004	0.010	0.10	0.25	
C	0.053	0.061	1.35	1.55	
D	0.013	0.020	0.33	0.51	
E	0.007	0.010	0.17	0.25	
F	0.185	0.200	4.70	5.10	
G	0.050		1.270		TYP.
H	0.228	0.244	5.80	6.20	
J	0.150	0.157	3.80	4.00	
K	0.016	0.050	0.40	1.27	
θ	0°	8°	0°	8°	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-30V, V_{GS}=0V$			-1	μA
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.0	-1.5	-2.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4.9A$		50	60	m Ω
		$V_{GS}=-4.5V, I_D=-3.7A$		66	90	
Forward Transconductance ^(Note 2)	g_{FS}	$V_{DS}=-10V, I_D=-4.9A$	6			S
Diode Forward Voltage ^(Note 2)	V_{SD}	$V_{GS}=0V, I_S=-1.7A$			-1.2	V
Dynamic Characteristics^(Note 3)						
Turn-On Delay Time	$t_{d(on)}$	$V_{GEN}=-10V, V_{DD}=-15V, I_D\approx -1A$ $R_G=6\Omega, R_L=15\Omega$			15	ns
Turn-On Rise Time	t_r				20	
Turn-Off Delay Time	$t_{d(off)}$				80	
Turn-Off Fall Time	t_f				40	
Total Gate Charge	Q_g	$V_{GS}=-10V, V_{DS}=-15V$ $I_D=-4.9A$			25	nC
Gate-Source Charge	Q_{gs}			4		
Gate-Drain Charge	Q_{gd}			2		

Notes :

1. Surface Mounted on FR4 Board, $t \leq 10$ sec.
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

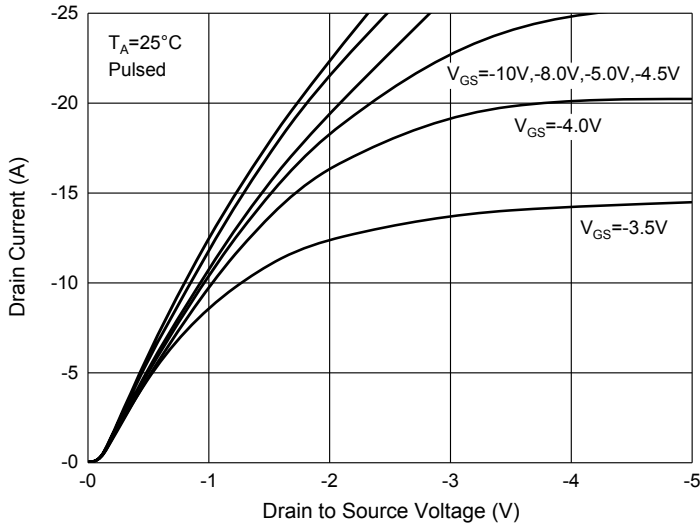


Fig. 2 - Transfer Characteristics

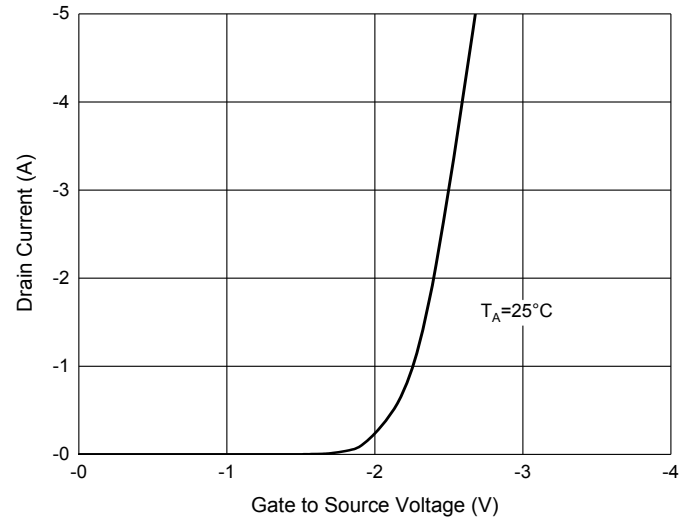


Fig. 3 - $R_{DS(ON)} - I_D$

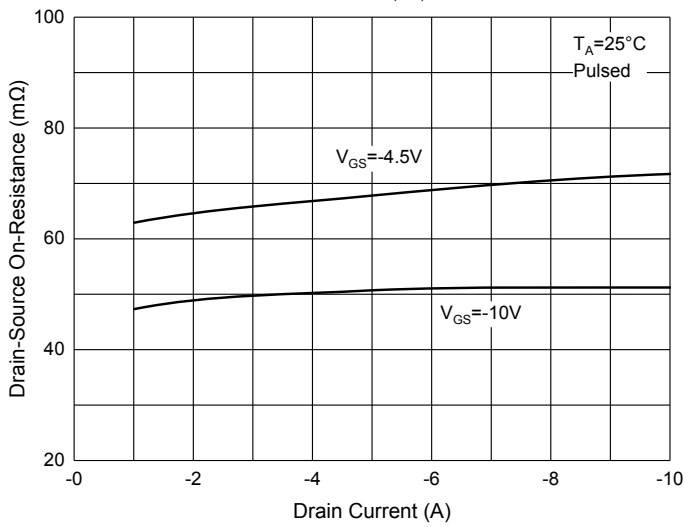


Fig. 4 - $R_{DS(ON)} - V_{GS}$

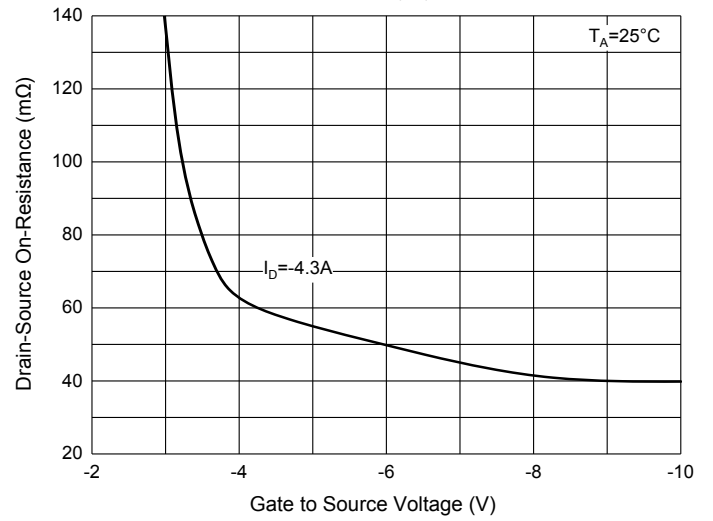


Fig. 5 - $I_S - V_{SD}$

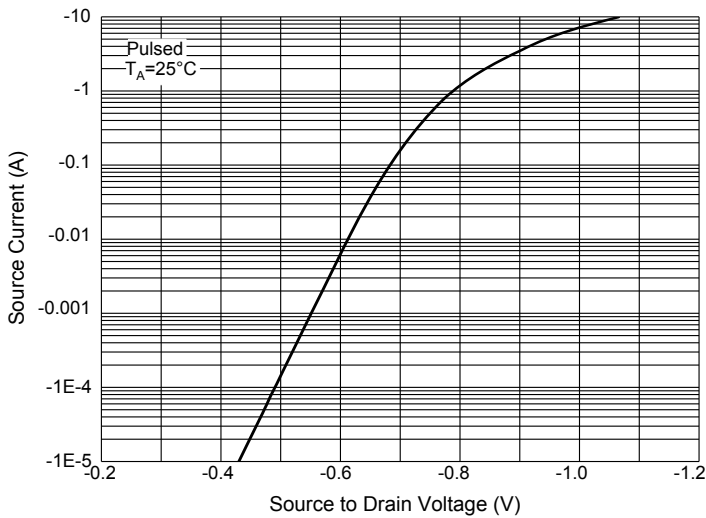
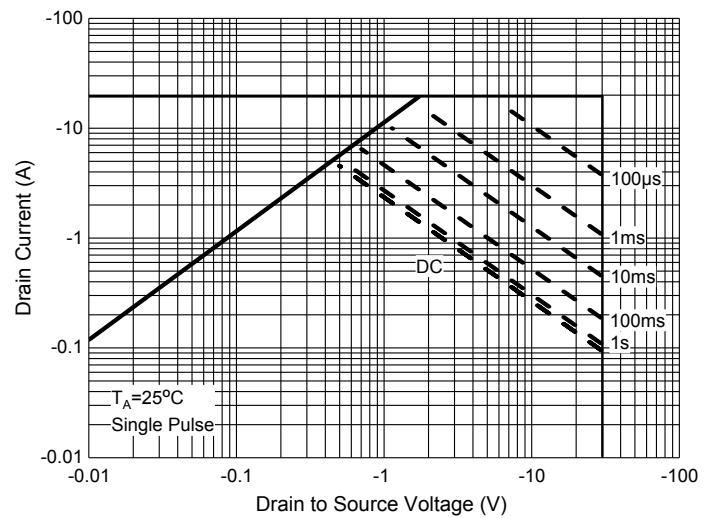


Fig. 6 - Safe Operation Area



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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