

## 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"

## Dual P-Channel MOSFET

## Maximum Ratings

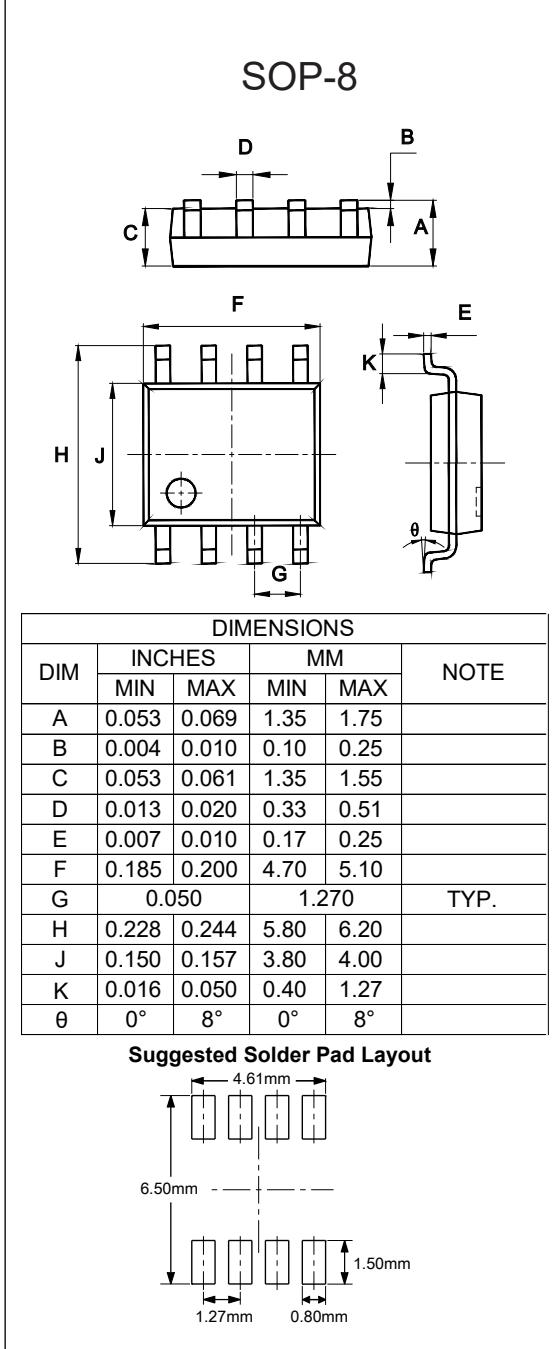
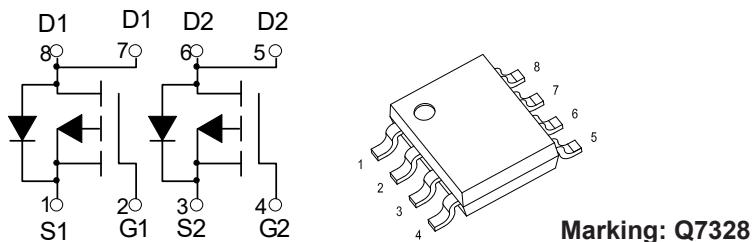
- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 89°C/W Junction to Ambient (Note 2)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V <sub>DS</sub>	-30	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Drain Current	I <sub>D</sub>	-8	A
Pulsed Drain Current (Note 1)	I <sub>DM</sub>	-32	A
Total Power Dissipation (Note 2)	P <sub>D</sub>	1.4	W

### Notes :

1. Pulse Width Limited By Junction Temperature.
2. Surface Mounted on 1"x1" FR4 Board, t≤10s.

## Internal Structure:



**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	$I_{DSS}$	$V_{DS}=-24V, V_{GS}=0V$			-15	$\mu A$
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 <sup>(Note 3)</sup>	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-8A$		19	21	$m\Omega$
		$V_{GS}=-4.5V, I_D=-6.8A$		26	32	
Forward Transconductance	$g_{FS}$	$V_{DS}=-10V, I_D=-8A$	12			S
<b>Dynamic Characteristics<sup>(Note 4)</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS}=-25V, V_{GS}=0V, f=1MHz$		2675		pF
Output Capacitance	$C_{oss}$			409		
Reverse Transfer Capacitance	$C_{rss}$			262		
Total Gate Charge	$Q_g$	$V_{DD}=-15V, V_{GS}=-10V, I_D=-8A$			78	nC
Gate-Source Charge	$Q_{gs}$				9.8	
Gate-Drain Charge	$Q_{gd}$				8.3	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-15V, V_{GS}=-10V, I_D=-1A$ $R_G=6\Omega, R_D=15\Omega$			20	ns
Turn-On Rise Time	$t_r$				23	
Turn-Off Delay Time	$t_{d(off)}$				297	
Turn-Off Fall Time	$t_f$				147	
<b>Drain-Source Body Diode Characteristics</b>						
Body Diode Voltage <sup>(Note 3)</sup>	$V_{SD}$	$I_{SD}=-2A, V_{GS}=0V$			-1.2	V

Notes :

3. Pulse Test : Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .
4. Guaranteed by Design, Not Subject to Production Testing.

## Curve Characteristics

Fig. 1 - Output Characteristics

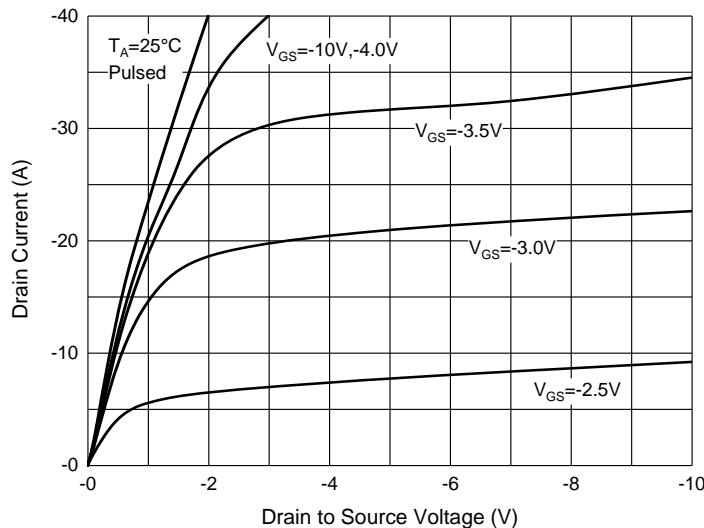


Fig. 2 - Transfer Characteristics

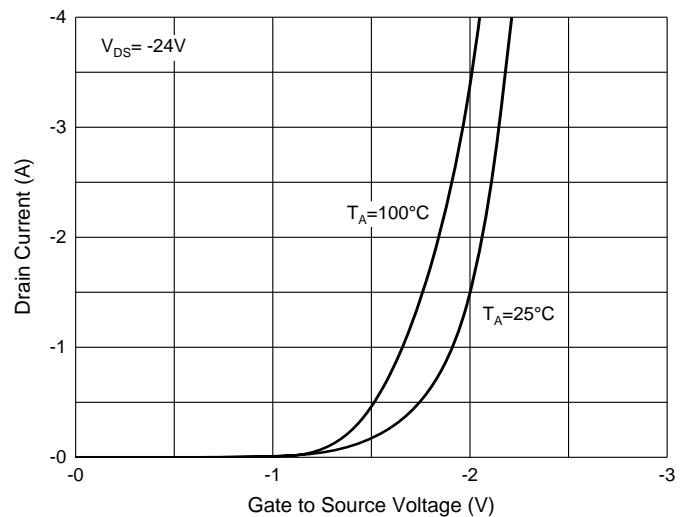


Fig. 3 -  $R_{DS(ON)} - I_D$

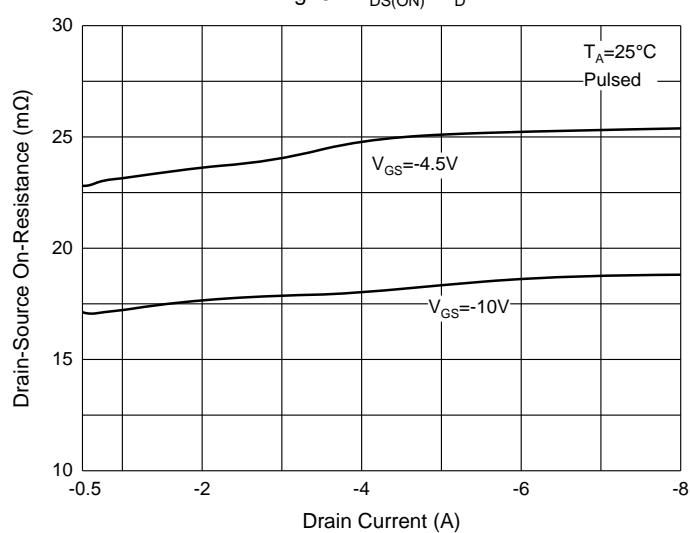


Fig. 4 -  $R_{DS(ON)} - V_{GS}$

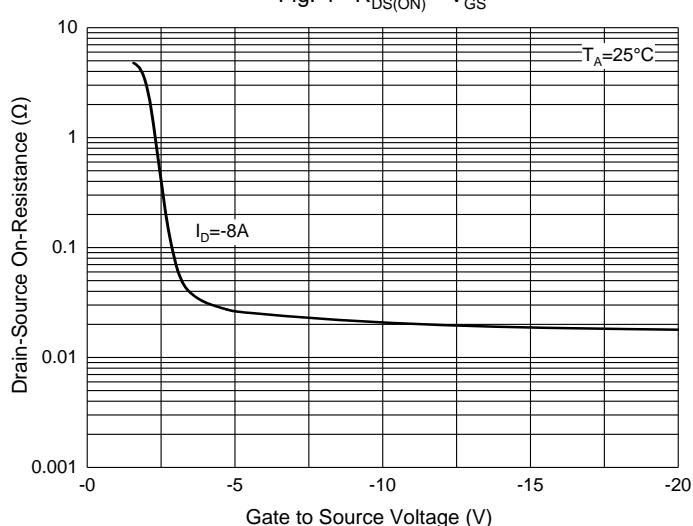


Fig. 5 -  $I_S - V_{SD}$

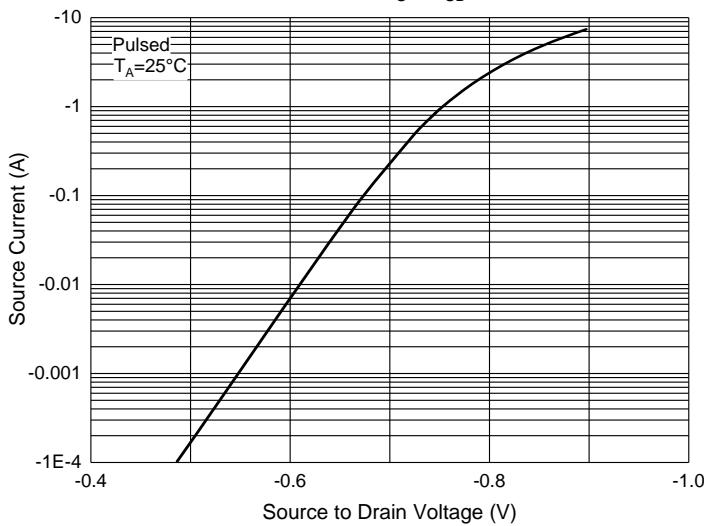
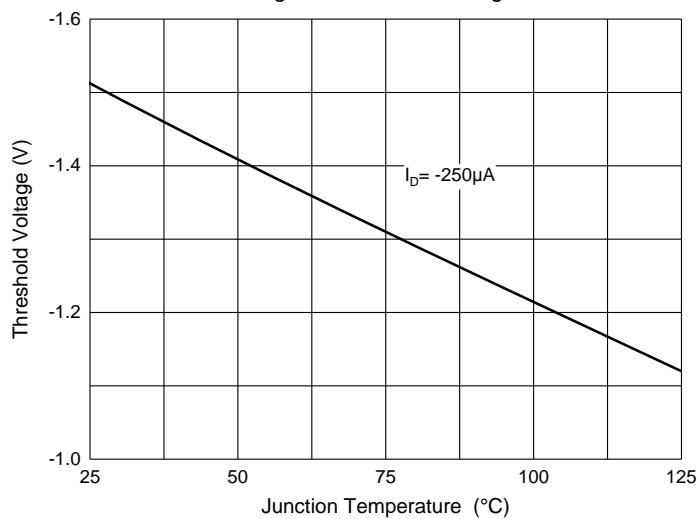


Fig. 6 - Threshold Voltage



## 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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