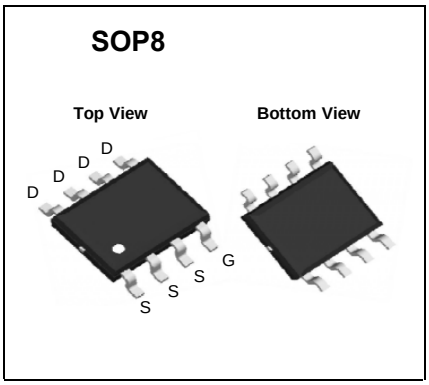
P-Channel MOSFET

SOP-8 Plastic-Encapsulate MOSFETS

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-30 V	35mΩ@-10V	-6.0A
	58mΩ@-4.5V	

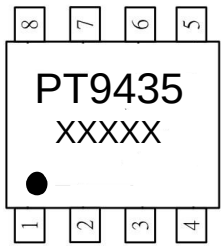


FEATURE

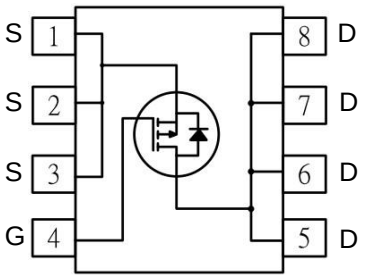
- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for Portable equipment
- Easily designed drive circuits
- Easy to parallel

APPLICATION

- Interfacing , Switching



Equivalent Circuit



Absolute Maximum Ratings T_A=25°C unless otherwise noted				
Parameter		**Symbol**	**Max p-channel**	**Units**
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current [A]	T_A=25°C	I_D	-6	A
	T_A=70°C		-5	
Pulsed Drain Current [B]		I_{DM}	-30	
Power Dissipation	T_A=25°C	P_D	2	W
	T_A=70°C		1.44	
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	°C

Thermal Characteristics: n-channel and p-channel					
Parameter		**Symbol**	**Typ**	**Max**	**Units**
Maximum Junction-to-Ambient [A]	t ≤ 10s	$R_{\theta JA}$	48	62.5	°C/W
Maximum Junction-to-Ambient [A]	Steady-State		74	110	°C/W
Maximum Junction-to-Lead [C]	Steady-State	$R_{\theta JL}$	35	40	°C/W

P-Channel MOSFET

ELECTRICAL CHARACTERISTICS (Ta= 25 , unless otherwise specified.)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
STATIC PARAMETERS						
BV_{DSS}	Drain-Source Breakdown Voltage	I_D=-250μA, V_{GS}=0V	-30			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=-24V, V_{GS}=0V			-1	μA
		T_J=55°C			-5	
I_{GSS}	Gate-Body leakage current	V_{DS}=0V, V_{GS}=±20V			±100	nA
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS} I_D=-250μA	-1.2	-2	-2.4	V
$I_{D(ON)}$	On state drain current	V_{GS}=-10V, V_{DS}=-5V	30			A
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=-10V, I_D=-6A		28	35	mΩ
		T_J=125°C		37	45	
		V_{GS}=-4.5V, I_D=-5A		44	58	mΩ
g_{FS}	Forward Transconductance	V_{DS}=-5V, I_D=-6A		13		S
V_{SD}	Diode Forward Voltage	I_S=-1A,V_{GS}=0V		-0.76	-1	V
I_S	Maximum Body-Diode Continuous Current				-4.2	A
DYNAMIC PARAMETERS						
C_{iss}	Input Capacitance	V_{GS}=0V, V_{DS}=-15V, f=1MHz		920		pF
C_{oss}	Output Capacitance			190		pF
C_{rss}	Reverse Transfer Capacitance			122		pF
R_g	Gate resistance	V_{GS}=0V, V_{DS}=0V, f=1MHz		3.6		Ω
SWITCHING PARAMETERS						
Q_g(10V)	Total Gate Charge (10V)	V_{GS}=-10V, V_{DS}=-15V, I_D=-6A		18.5		nC
Q_g(4.5V)	Total Gate Charge (4.5V)			9.6		nC
Q_{gs}	Gate Source Charge			2.7		nC
Q_{gd}	Gate Drain Charge			4.5		nC
$t_{D(on)}$	Turn-On DelayTime	V_{GS}=-10V, V_{DS}=-15V, R_L=2.7Ω, R_{GEN}=3Ω		7.7		ns
t_r	Turn-On Rise Time			5.7		ns
$t_{D(off)}$	Turn-Off DelayTime			20.2		ns
t_f	Turn-Off Fall Time			9.5		ns
t_{rr}	Body Diode Reverse Recovery Time	I_F=-6A, dI/dt=100A/μs		20		ns
Q_{rr}	Body Diode Reverse Recovery Charge	I_F=-6A, dI/dt=100A/μs		8.8		nC

A: The value of $R_{\theta JA}$ is measured with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C. The value in any a given application depends on the user's specific board design. The current rating is based on the t≤ 10s thermal resistance rating.

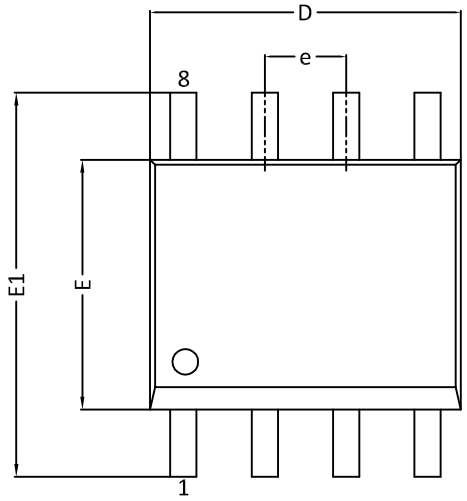
B: Repetitive rating, pulse width limited by junction temperature.

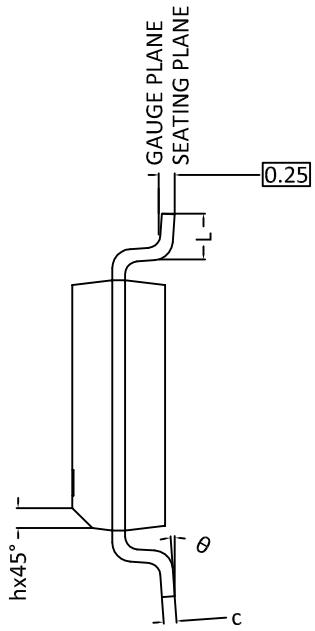
C. The $R_{\theta JA}$ is the sum of the thermal impedence from junction to lead $R_{\theta JL}$ and lead to ambient.

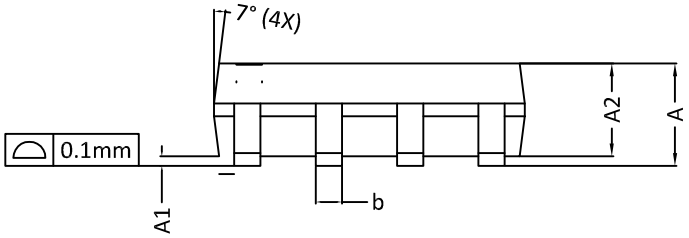
D. The static characteristics in Figures 1 to 6,12,14 are obtained using 80μs pulses, duty cycle 0.5% max.

E. These tests are performed with the device mounted on 1 in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A=25°C. The SOA curve provides a single pulse rating.

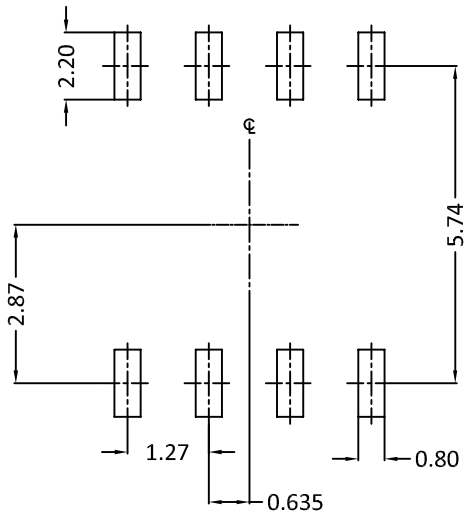
SOP-*8* Plastic-Encapsulate MOSFETS







RECOMMENDED LAND PATTERN



SYMBOLS	DIMENSION IN MM			DIMENSION IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.35	1.65	1.75	0.053	0.065	0.069
A1	0.10	0.15	0.25	0.004	0.006	0.010
A2	1.25	1.50	1.65	0.049	0.059	0.065
b	0.31	0.41	0.51	0.012	0.016	0.020
c	0.17	0.20	0.25	0.007	0.008	0.010
D	4.80	4.90	5.00	0.189	0.193	0.197
E	3.80	3.90	4.00	0.150	0.154	0.157
E1	5.80	6.00	6.20	0.228	0.236	0.244
e	1.27 BSC			0.050 BSC		
h	0.25	0.30	0.50	0.010	0.012	0.020
L	0.40	0.69	1.27	0.016	0.027	0.050
θ	0°	4°	8°	0°	4°	8°

UNIT: mm