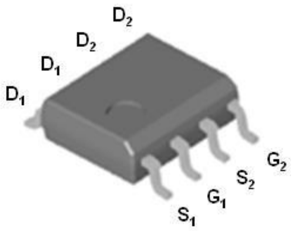
P261ALV

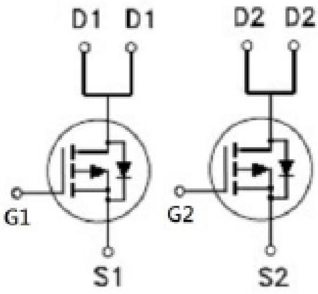
Dual P-Channel Enhancement Mode MOSFET

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-12V	19mΩ @V_{GS} = -4.5V	-8.5A



SOP-8



ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	-12	V
Gate-Source Voltage		V_{GS}	±8	V
Continuous Drain Current	T_A= 25 °C	I_D	-8.5	A
	T_A= 70 °C		-6.8	
Pulsed Drain Current[1]		I_{DM}	-34	
Avalanche Current		I_{AS}	-35	
Avalanche Energy	L = 0.1mH	E_{AS}	61	mJ
Power Dissipation	T_A= 25 °C	P_D	2	W
	T_A= 70°C		1.3	
Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient[2]	$R_{\theta JA}$		60	°C / W

[1] Pulse width limited by maximum junction temperature.

[2] 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.

P261ALV

Dual P-Channel Enhancement Mode MOSFET

ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

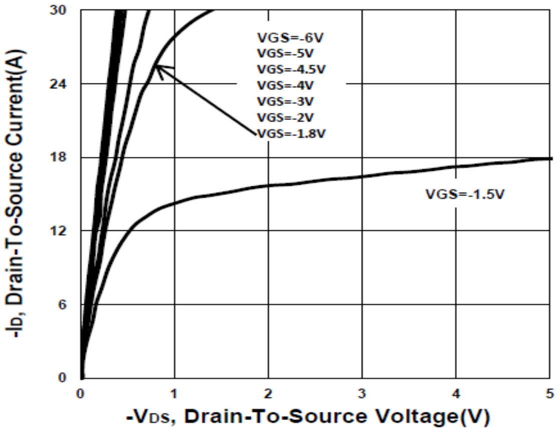
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =- 250µA	-12			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = -250µA	-0.35	-0.6	-0.85	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0V, V_{GS} = ±8V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -9.6V, V_{GS} = 0V			-1	µA
		V_{DS} =-9V, V_{GS} = 0V, T_J = 55°C			-10	
Drain-Source On-State Resistance[1]	$R_{DS(ON)}$	V_{GS} = -2.5V, I_D = -8A		17	24	mΩ
		V_{GS} =-4.5V, I_D = -8.3A		14	19	
Forward Transconductance[1]	g_{fs}	V_{DS} =-5V, I_D =-8.3A		49		S
DYNAMIC						
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = -6V, f = 1MHz		2618		pF
Output Capacitance	C_{oss}			686		
Reverse Transfer Capacitance	C_{rss}			617		
Gate Resistance	R_g	V_{GS} = 0V, V_{DS} = 0V, f = 1MHz		2.8		Ω
Total Gate Charge[2]	Q_g	V_{DS} = -6V , V_{GS} = -4.5V, I_D = -8.3A		33		nC
Gate-Source Charge[2]	Q_{gs}			3.8		
Gate-Drain Charge[2]	Q_{gd}			10.6		
Turn-On Delay Time[2]	$t_{d(on)}$	V_{DD} = -6V ID ≅ -8.3A, V_{GS} = -4.5V, R_{GEN} = 6Ω		35		nS
Rise Time[2]	t_r			69		
Turn-Off Delay Time[2]	$t_{d(off)}$			188		
Fall Time[2]	t_f			100		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Continuous Current	I_S				-2	A
Forward Voltage[1]	V_{SD}	I_F = -8.3A, V_{GS} = 0V			-1	V
Reverse Recovery Time	t_{rr}	I_F = -8.3A, dI/dt = 100A / µS		50		nS
Reverse Recovery Charge	Q_{rr}			36		µC

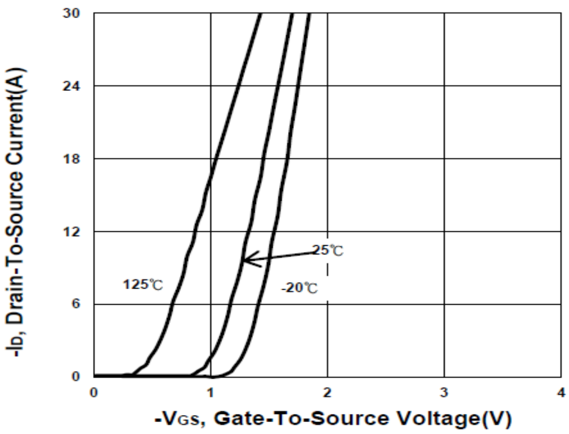
[1] Pulse test : Pulse Width ≤ 300 µsec, Duty Cycle ≤ 2%.

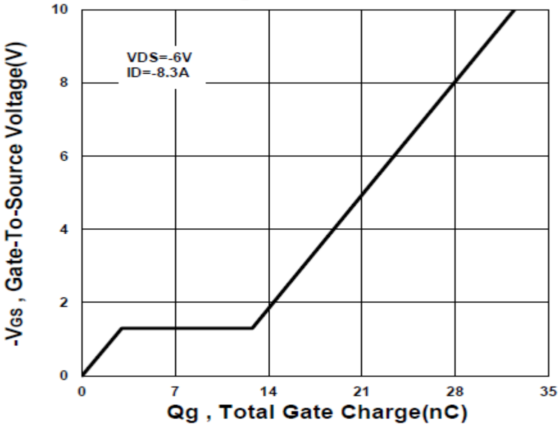
[2] Independent of operating temperature.

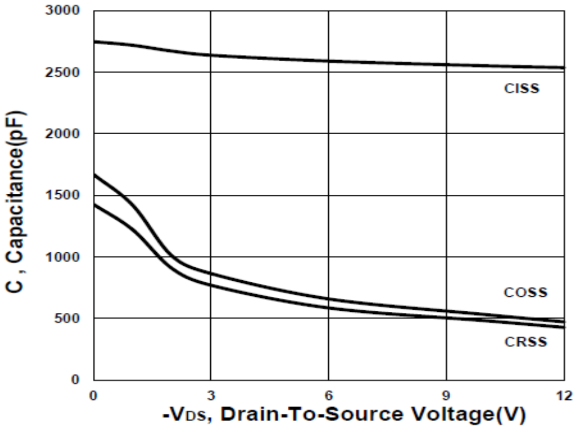
P261ALV

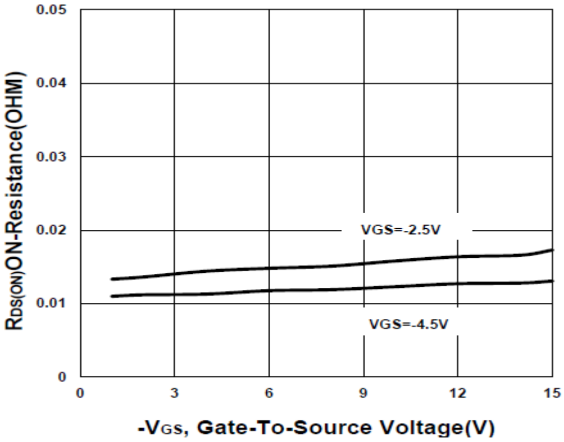
Dual P-Channel Enhancement Mode MOSFET

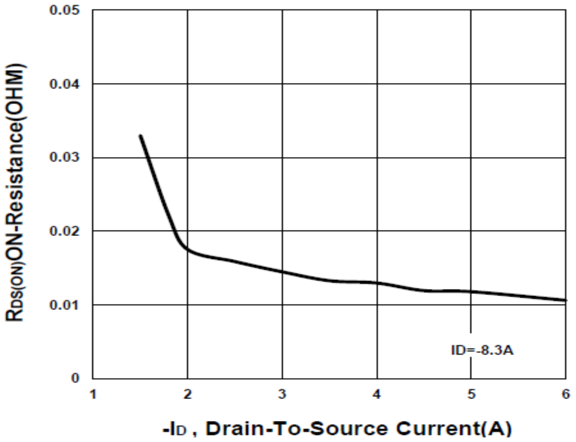

Output Characteristics


Transfer Characteristics


Gate charge Characteristics

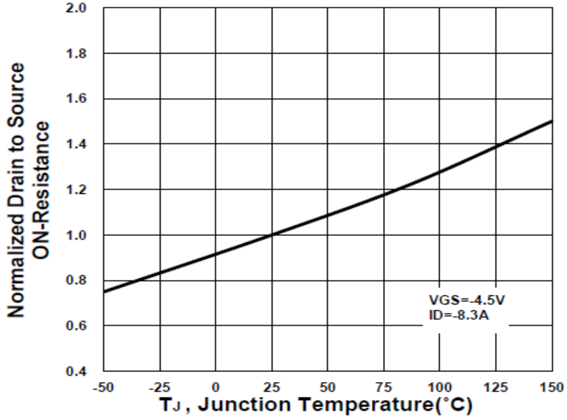

Capacitance Characteristic

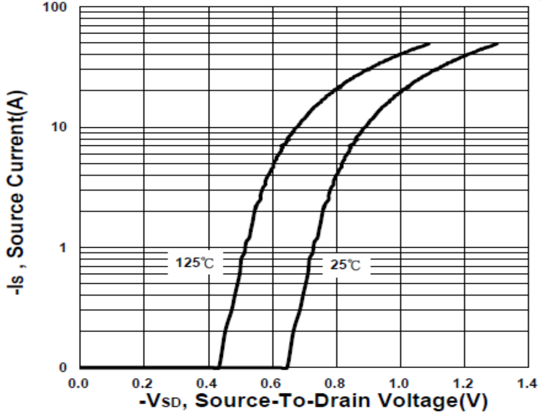

On-Resistance VS Gate-To-Source

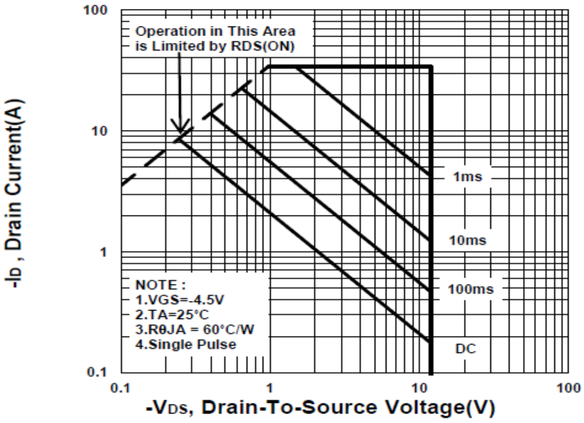

On-Resistance VS Drain Current

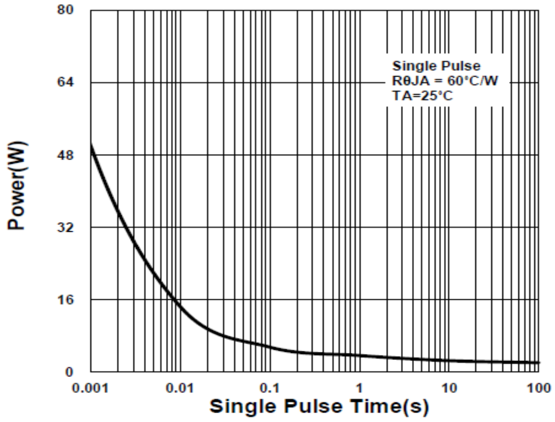
P261ALV

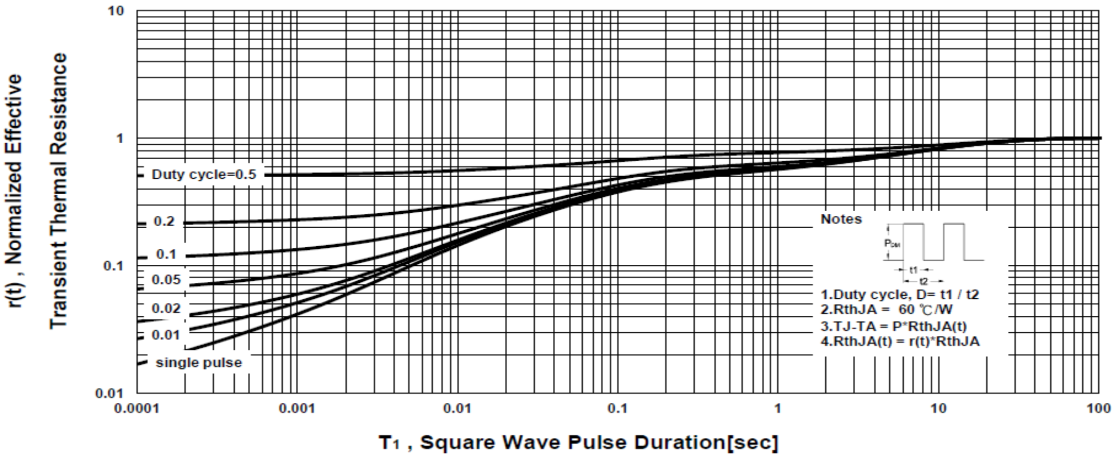
Dual P-Channel Enhancement Mode MOSFET


On-Resistance VS Temperature


Source-Drain Diode Forward Voltage


Safe Operating Area


Single Pulse Maximum Power Dissipation


Transient Thermal Response Curve

P261ALV

Dual P-Channel Enhancement Mode MOSFET

Package Dimension

SOP-8 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8	4.9	5.0	H	0.4	0.6	0.93
B	3.8	3.9	4.0	I	0.19	0.21	0.25
C	5.79	6.0	6.2	J	0.25	0.375	0.5
D	0.33	0.4	0.51	K	0°	3°	18°
E	1.25	1.27	1.29				
F	1.1	1.3	1.65				
G	0.05	0.15	0.25