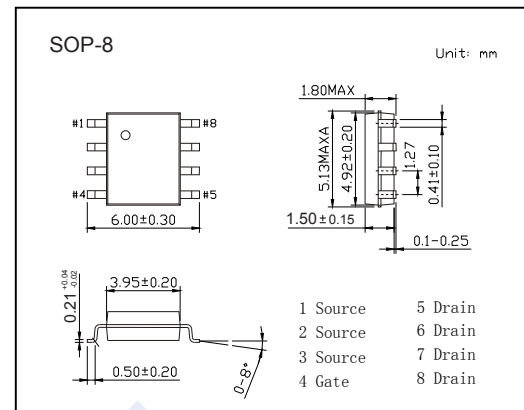
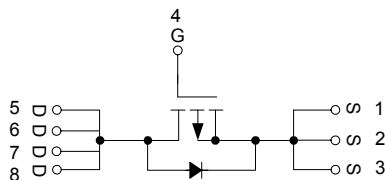


## P-Channel MOSFET

### APM9435K (APM9435KC)

#### ■ Features

- $V_{DS} (V) = -30V$
- $I_D = -4.6 A (V_{GS} = -10V)$
- $R_{DS(ON)} < 52m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 80m\Omega (V_{GS} = -4.5V)$



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	$V_{DS}$	-30	V	
Gate-Source Voltage	$V_{GS}$	$\pm 25$		
Continuous Drain Current @ $V_{GS} = -10V$ (Note.1)	$I_D$	-4.6	A	
Pulsed Drain Current @ $V_{GS} = -10V$ (Note.1)	$I_{DM}$	-20		
Power Dissipation	$P_D$	$T_a = 25^\circ C$	2	W
		$T_a = 100^\circ C$	0.8	
Thermal Resistance Junction- to-Ambient	$R_{thJA}$	62.5	$^\circ C/W$	
Junction Temperature	$T_J$	150	$^\circ C$	
Junction Storage Temperature Range	$T_{stg}$	-55 to 150		

Note.1: Surface Mounted on  $1in^2$  pad area,  $t \leq 10sec$ .

## P-Channel MOSFET

### APM9435K (APM9435KC)

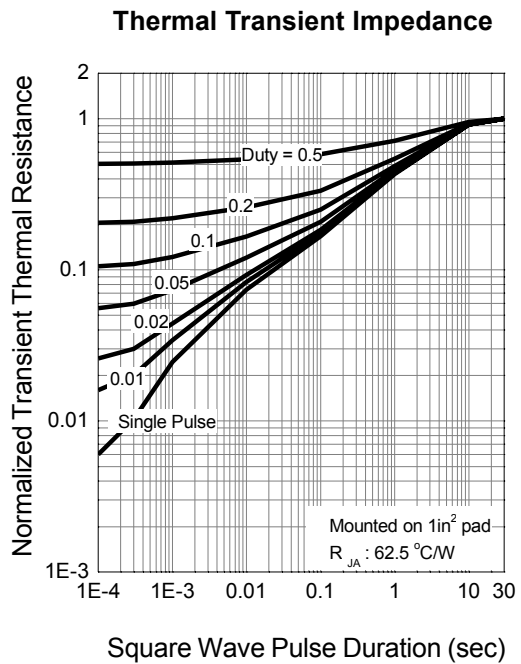
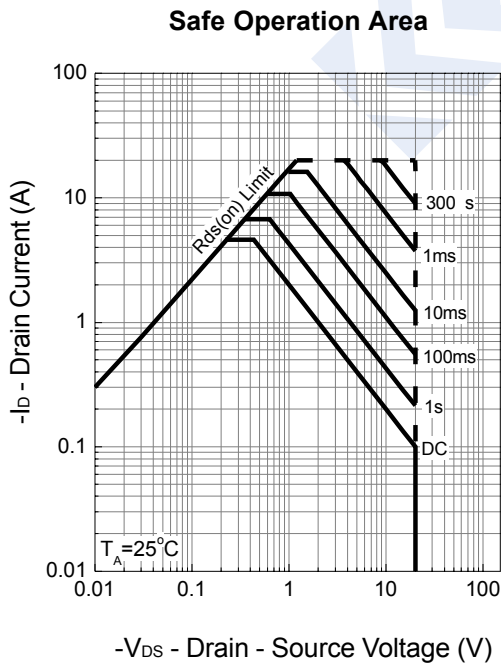
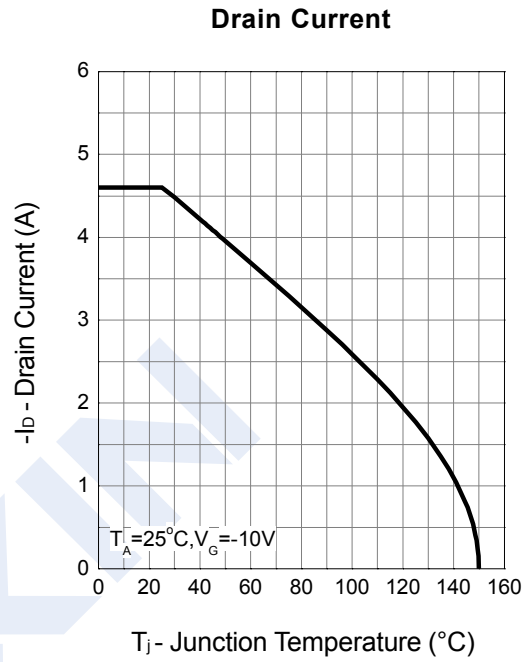
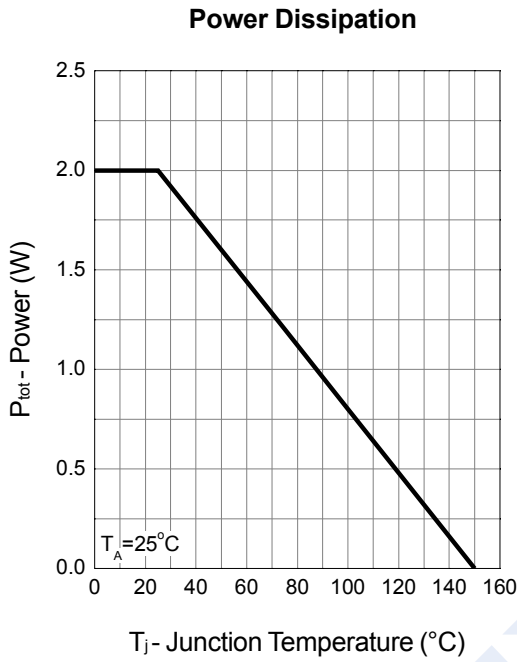
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =-250 μA, V <sub>GS</sub> =0V	-30			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-24V, V <sub>GS</sub> =0V			-1	μA
		V <sub>DS</sub> =-24V, V <sub>GS</sub> =0V, T <sub>J</sub> =55°C			-30	
Gate-Body leakage current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±25V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =-250 μA	-1		-2	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-4.6A (Note.1)		52	60	mΩ
		V <sub>GS</sub> =-4.5V, I <sub>D</sub> =-2A (Note.1)		80	95	
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-25V, f=1MHz		845		pF
Output Capacitance	C <sub>oss</sub>			120		
Reverse Transfer Capacitance	C <sub>rss</sub>			80		
Gate resistance	R <sub>g</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz		11.7		Ω
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-15V, I <sub>D</sub> =-4.6A		22.5	29	nC
Gate Source Charge	Q <sub>gs</sub>			4.5		
Gate Drain Charge	Q <sub>gd</sub>			2		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DD</sub> =-15V, R <sub>L</sub> =15Ω, I <sub>DS</sub> =-1A, V <sub>GEN</sub> =-10V, R <sub>G</sub> =6Ω		8	17	ns
Turn-On Rise Time	t <sub>r</sub>			8	18	
Turn-Off DelayTime	t <sub>d(off)</sub>			35	60	
Turn-Off Fall Time	t <sub>f</sub>			11	28	
Maximum Body-Diode Continuous Current	I <sub>S</sub>				-2	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-2A, V <sub>GS</sub> =0V (Note.1)			-1.3	V

Note.1: Pulse test ; pulse width ≤ 300μs, duty cycle ≤ 2%.

## P-Channel MOSFET APM9435K (APM9435KC)

■ Typical Characteristics

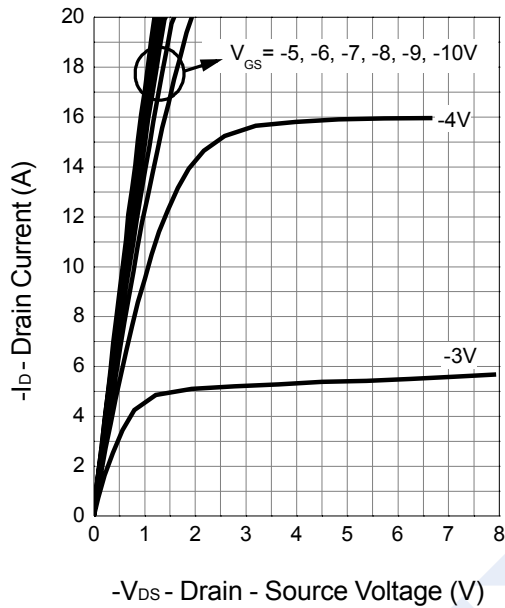


## P-Channel MOSFET

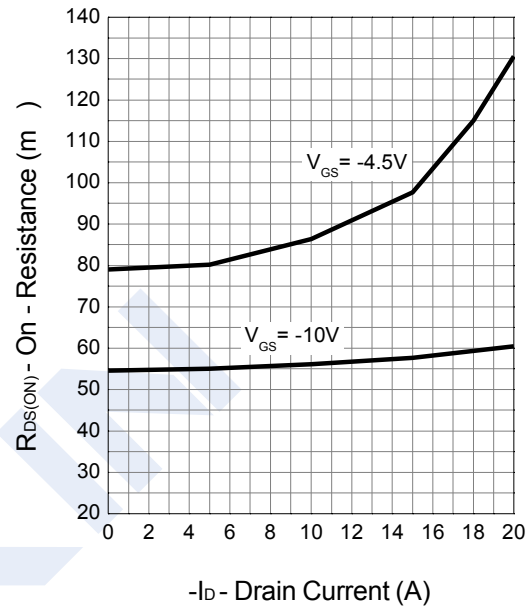
### APM9435K (APM9435KC)

#### Typical Characteristics

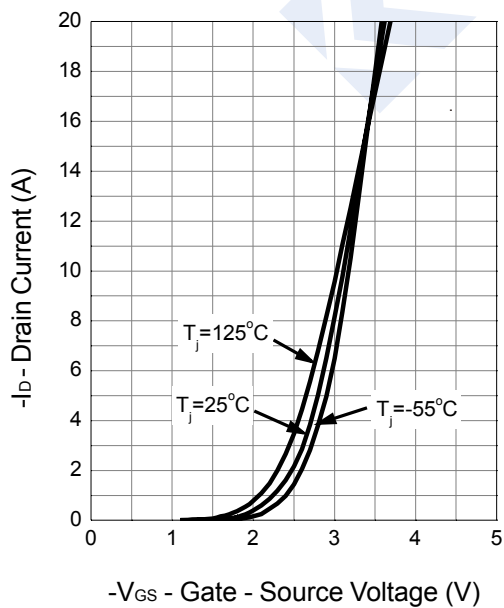
#### Output Characteristics



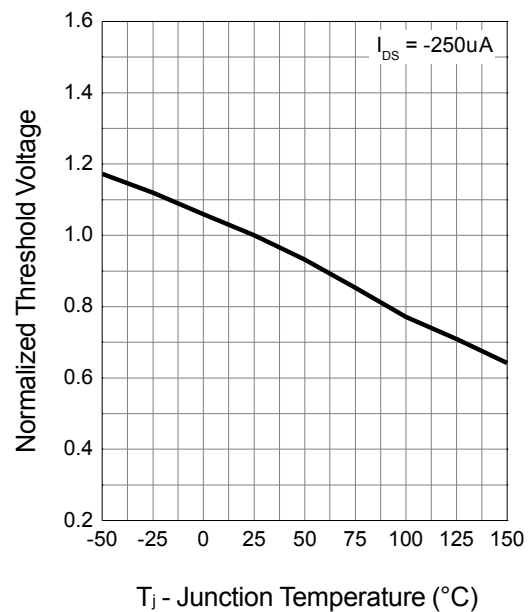
#### Drain-Source On Resistance



#### Transfer Characteristics



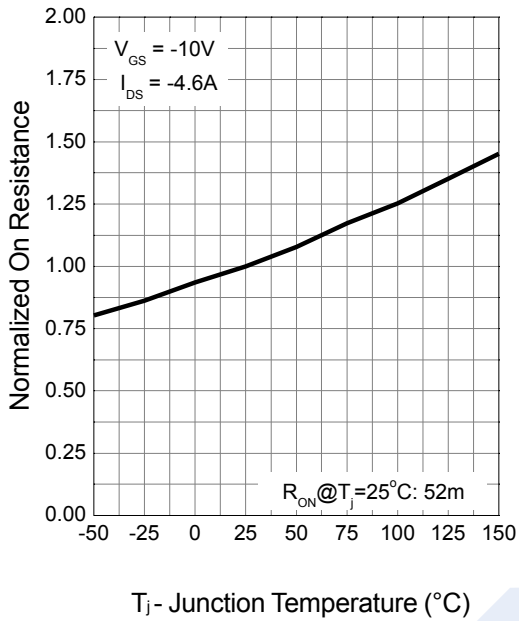
#### Gate Threshold Voltage



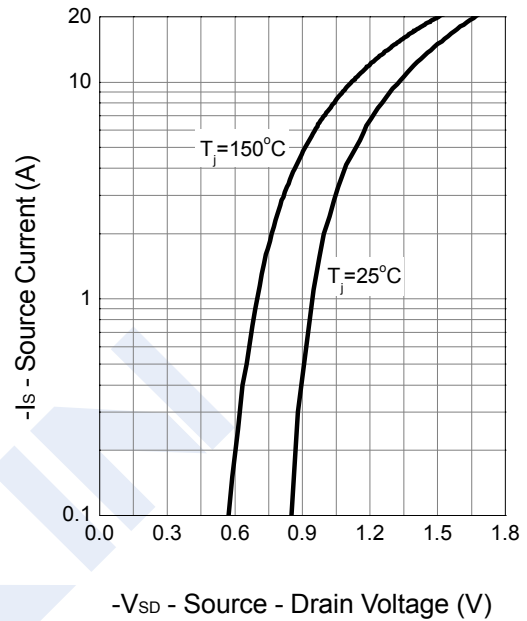
## P-Channel MOSFET APM9435K (APM9435KC)

■ Typical Characteristics

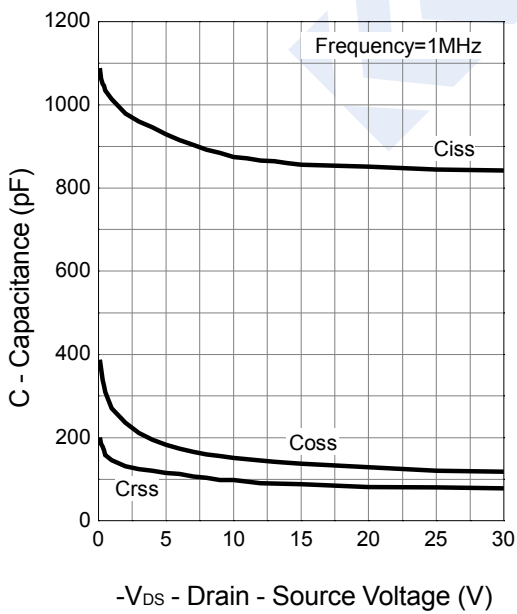
**Drain-Source On Resistance**



**Source-Drain Diode Forward**



**Capacitance**



**Gate Charge**

