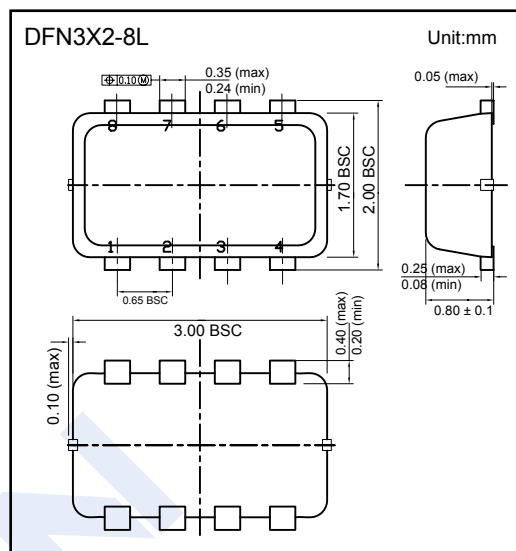
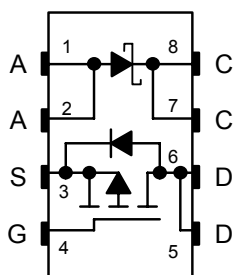


P+Schottky Hybrid MOSFET

WPM2005B (KPM2005B)

■ Features

- $V_{DS} (V) \approx -20V$
- $I_D \approx -2.7 A$ ($V_{GS} \approx -10V$)
- $R_{DS(ON)} < 125m\Omega$ ($V_{GS} \approx -4.5V$)
- $R_{DS(ON)} < 160m\Omega$ ($V_{GS} \approx -2.5V$)
- Ultra Low VF Schottky



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

Parameter	Symbol	MOSFET	Schottky	Unit
Drain-Source Voltage	V _{DS}	-20	-	V
Gate-Source Voltage	V _{GS}	± 8	-	
Peak Repetitive Reverse Voltage	V _{RRM}	–	20	
DC Blocking Voltage	V _R	–	20	
Continuous Drain Current	I _D	-2.7	-	A
Pulsed Drain Current	I _{DM}	-10	-	
Average Rectified Forward Current	I _F	-	1	
Power Dissipation	P _D	1.1	-	W
Thermal Resistance.Junction- to-Ambient	R _{thJA}	110	-	°C/W
Junction Temperature	T _J	150		°C
Junction Storage Temperature Range	T _{stg}	-55 to 150		

P+Schottky Hybrid MOSFET

WPM2005B (KPM2005B)

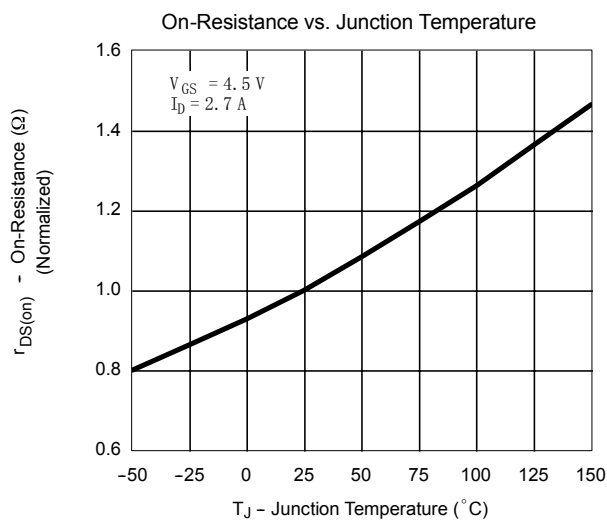
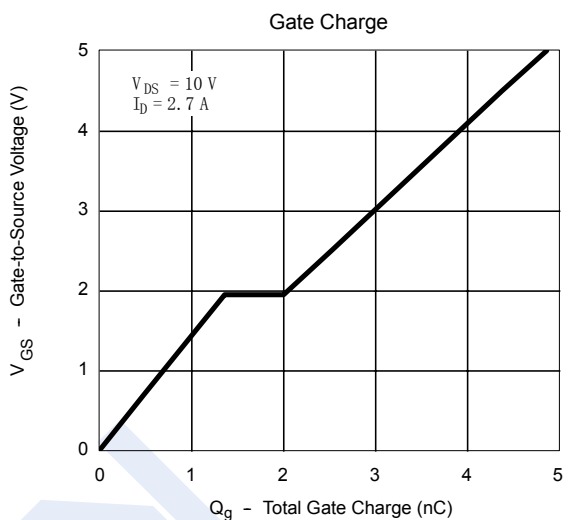
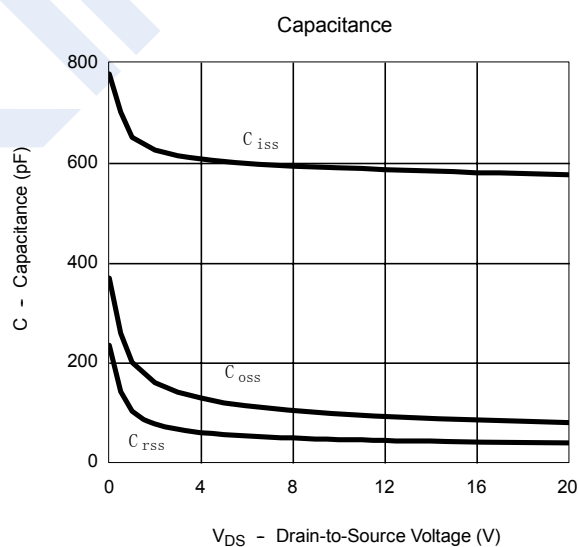
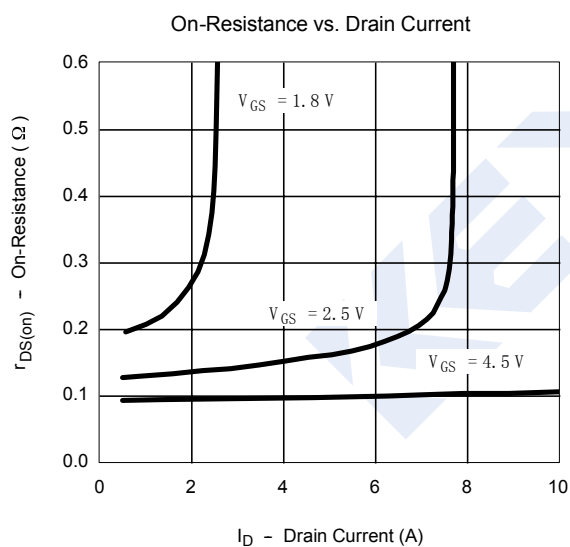
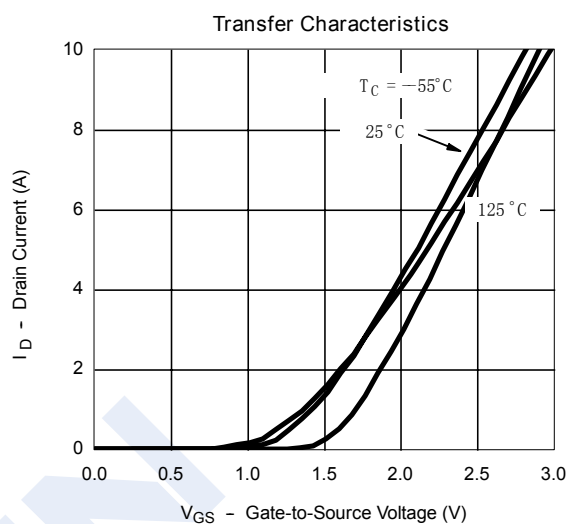
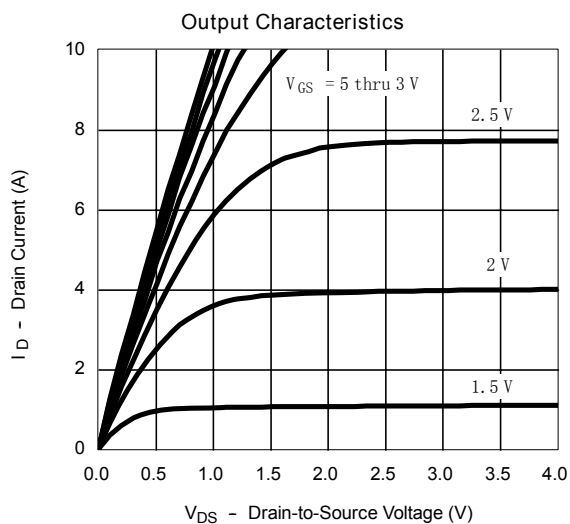
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V			-1	μA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250 μA	-0.45		-0.81	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-2.7A			125	mΩ
		V _{GS} =-2.5V, I _D =-2.2A			160	
Forward Transconductance	g _{FS}	V _{DS} =-10V, I _D =-2.7A		7		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, f=1MHz			300	pF
Output Capacitance	C _{oss}				150	
Reverse Transfer Capacitance	C _{rss}				50	
Total Gate Charge	Q _{g(TOT)}	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-2.7A		3	6.5	nC
Threshold Gate Charge	Q _{g(TH)}			0.2		
Gate Source Charge	Q _{gs}			1.4		
Gate Drain Charge	Q _{gd}			0.7		
Turn-On DelayTime	t _{d(on)}	V _{GS} = -4.5V, V _{DD} = -10V, I _D = -1A, R _G =6Ω,			25	ns
Turn-On Rise Time	t _r				45	
Turn-Off DelayTime	t _{d(off)}				45	
Turn-Off Fall Time	t _f				40	
Forward voltage	V _F	I _F =0.1A		0.425		V
		I _F =0.5A		0.48		
		I _F =1A			0.575	
Reverse current	I _R	V _R =10V			20	μA
		V _R =20V			100	
Diode Forward Voltage	V _{SD}	I _S =-0.9A, V _{GS} =0V			-1.5	V

P+Schottky Hybrid MOSFET

WPM2005B (KPM2005B)

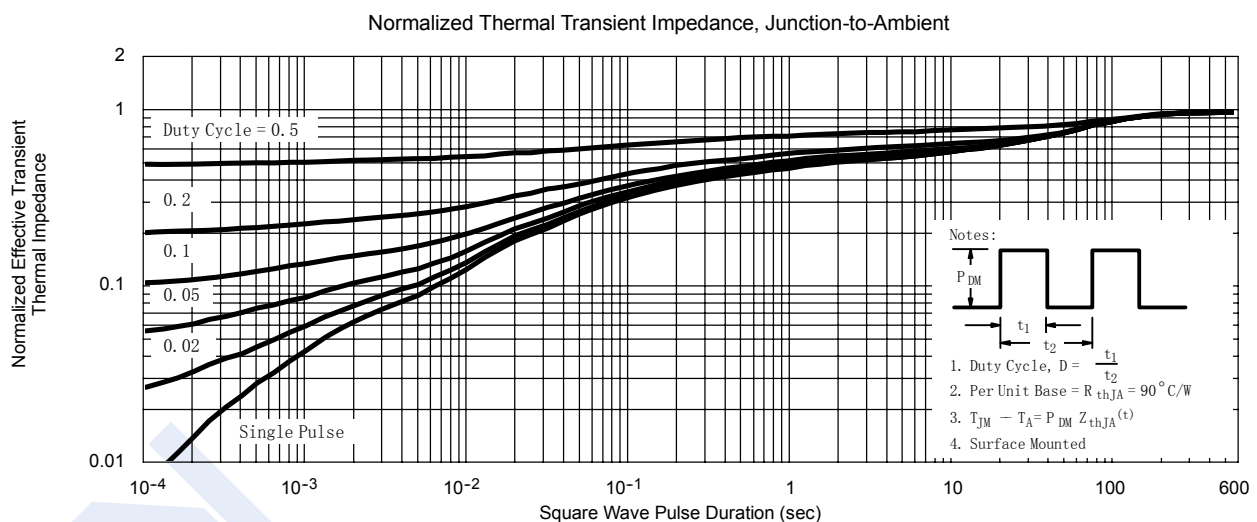
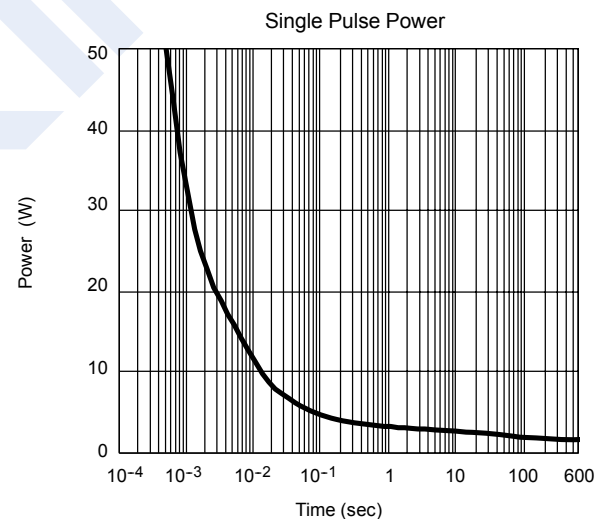
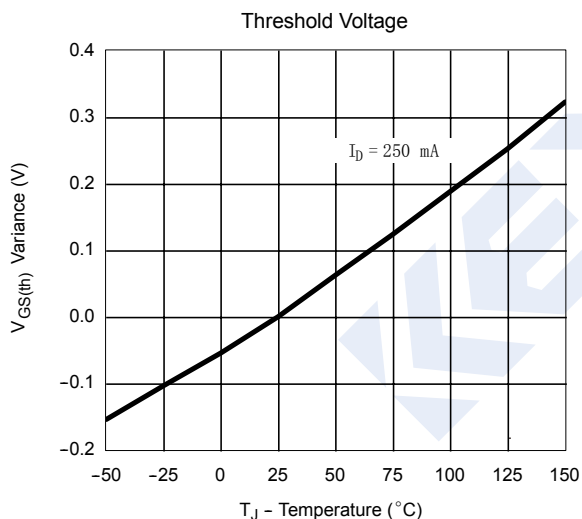
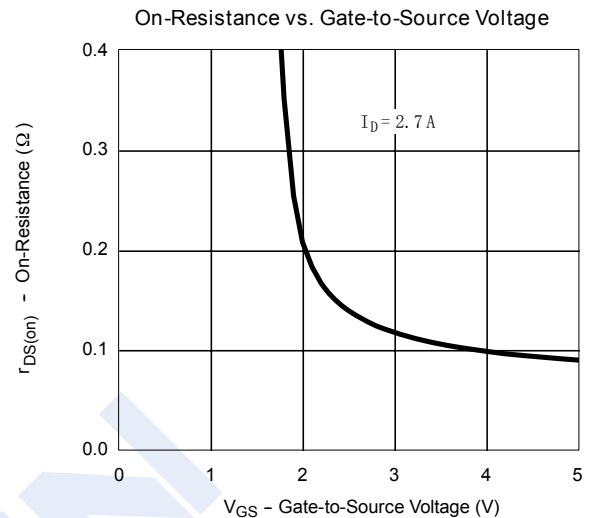
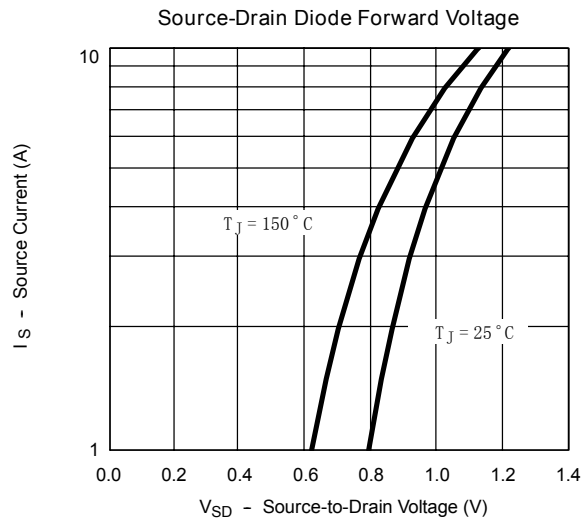
■ Typical Characteristics



P+Schottky Hybrid MOSFET

WPM2005B (KPM2005B)

■ Typical Characteristics

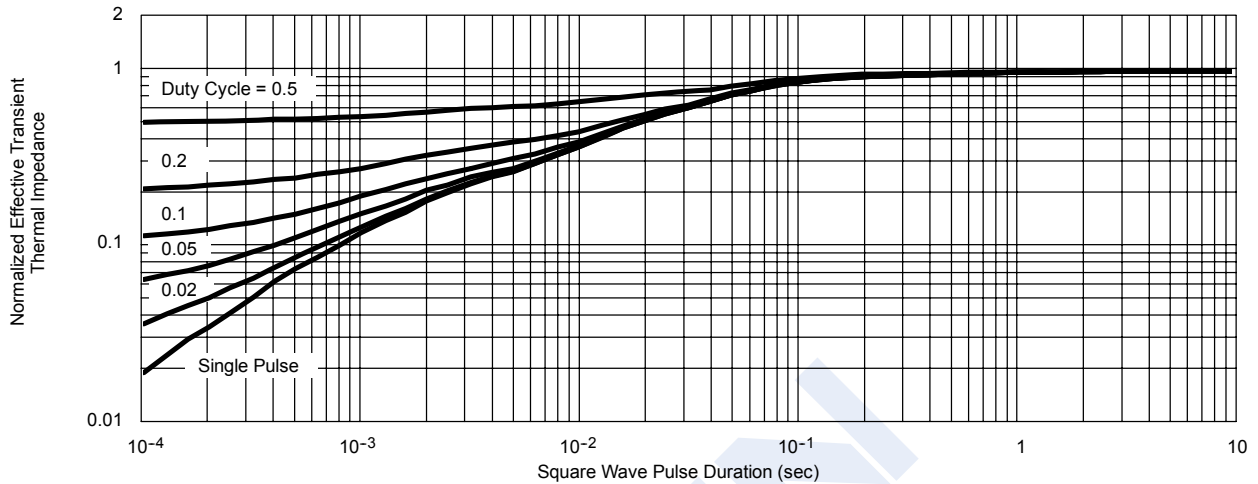


P+Schottky Hybrid MOSFET

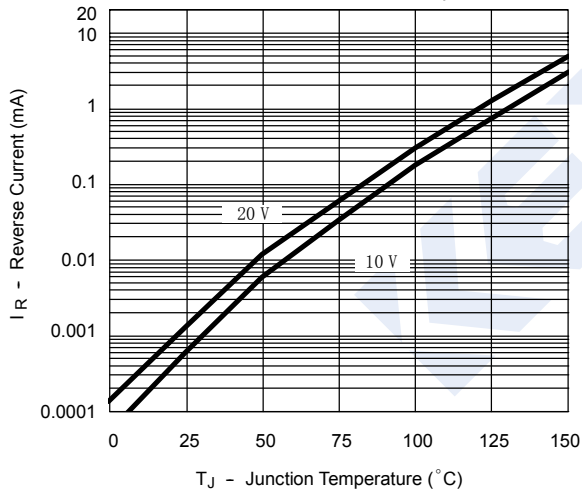
WPM2005B (KPM2005B)

■ Typical Characteristics

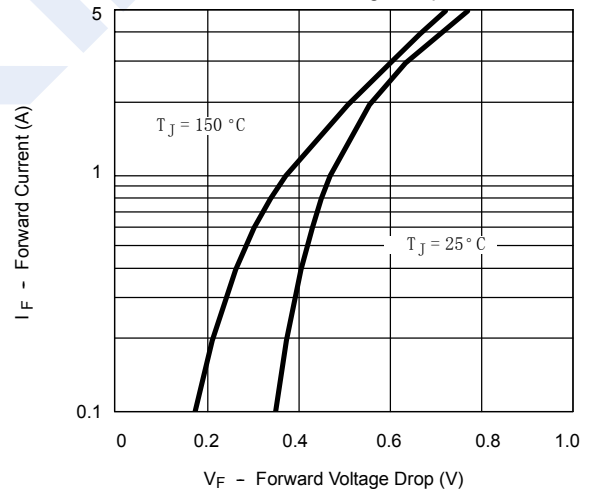
Normalized Thermal Transient Impedance, Junction-to-Foot



Reverse Current vs. Junction Temperature



Forward Voltage Drop



Capacitance

