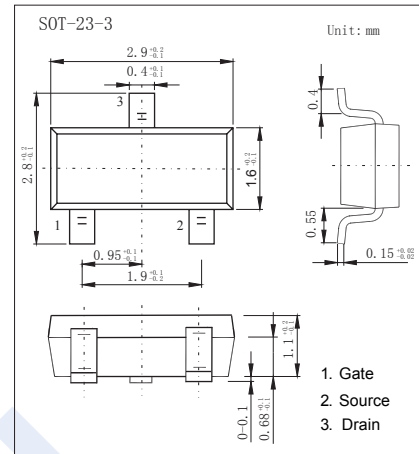
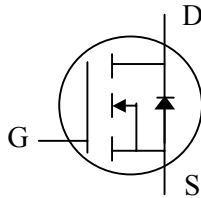


N-Channel MOSFET

AP2322GN-HF (KP2322GN-HF)

■ Features

- $V_{DS} (V) = 20V$
- $I_D = 2.5 A$
- $R_{DS(ON)} < 90m\Omega$ ($V_{GS} = 4.5V$)
- $R_{DS(ON)} < 120m\Omega$ ($V_{GS} = 2.5V$)
- $R_{DS(ON)} < 150m\Omega$ ($V_{GS} = 1.8V$)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 8	
Continuous Drain Current	I_D	$T_A=25^\circ C$	2.5
		$T_A=70^\circ C$	2
Pulsed Drain Current	I_{DM}	10	A
Power Dissipation	P_D	0.833	W
Linear Derating Factor		0.006	W/ $^\circ C$
Thermal Resistance, Junction- to-Ambient	R_{thJA}	150	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

N-Channel MOSFET

AP2322GN-HF (KP2322GN-HF)

■ 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 _{BSS}	V _{DS} =20V, 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 =1 mA	0.3		1	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =1.6A			90	mΩ
		V _{GS} =2.5V, I _D =1A			120	
		V _{GS} =1.8V, I _D =0.3A			150	
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =2A		2		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =20V, f=1MHz		350	560	pF
Output Capacitance	C _{oss}			55		
Reverse Transfer Capacitance	C _{rss}			48		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz			4.8	Ω
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =16V, I _D =2.2A		7	11	nC
Gate Source Charge	Q _{gs}			0.7		
Gate Drain Charge	Q _{gd}			2.5		
Turn-On DelayTime	t _{d(on)}	V _{GS} =5V, V _{DS} =10V, R _L =10Ω, R _G =3.3Ω I _D =1A		6		ns
Turn-On Rise Time	t _r			12		
Turn-Off DelayTime	t _{d(off)}			16		
Turn-Off Fall Time	t _f			4		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 2A, V _{GS} =0, di/dt= 100A/μs		20		nC
Body Diode Reverse Recovery Charge	Q _{rr}			13		
Diode Forward Voltage	V _{SD}	I _S =0.7A, V _{GS} =0V			1.2	V

■ Marking

Marking	X0 F **
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N-Channel MOSFET AP2322GN-HF (KP2322GN-HF)

■ Typical Characteristics

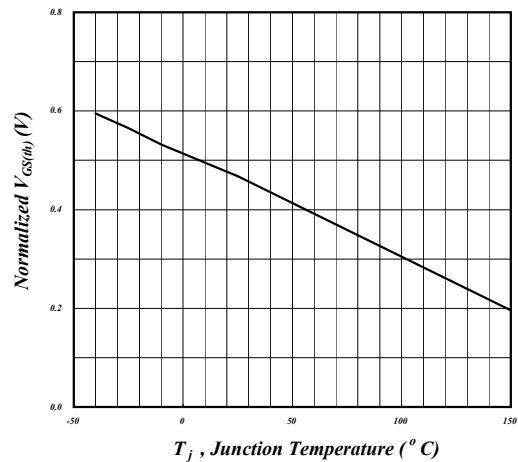
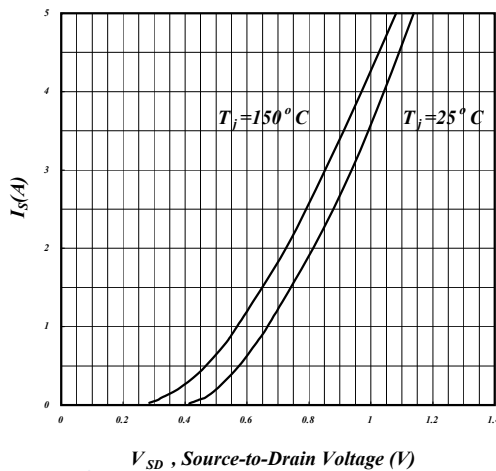
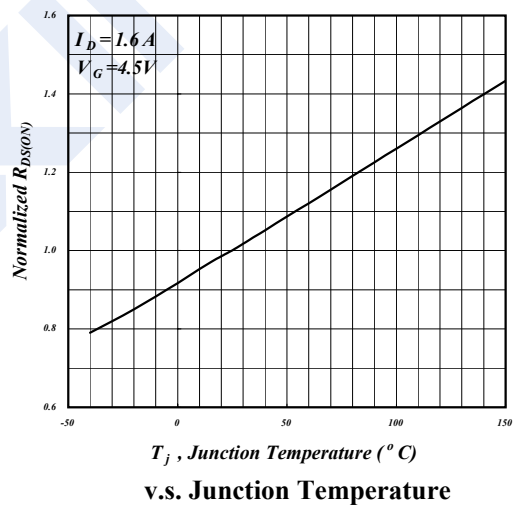
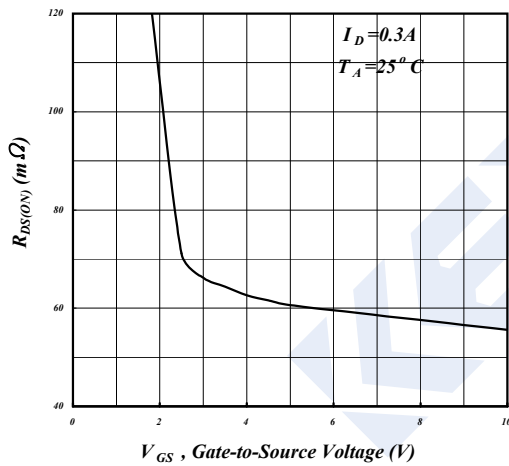
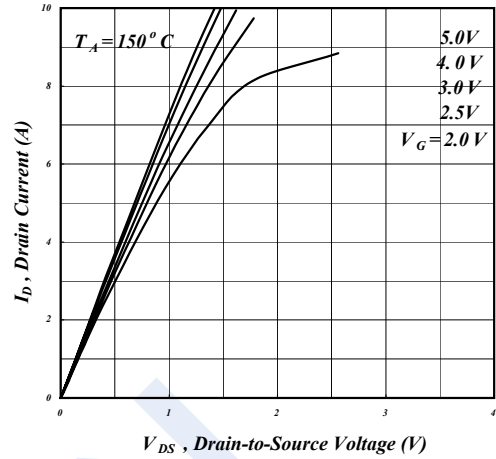
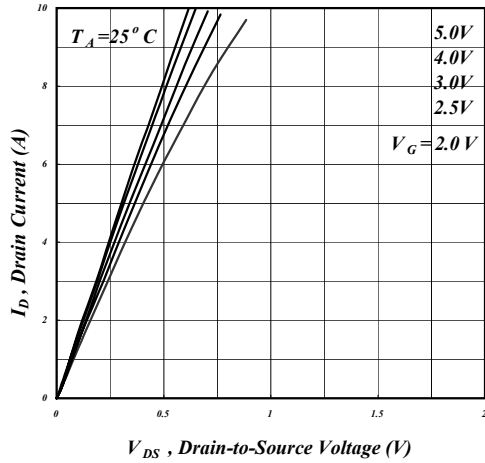


Fig 5. Forward Characteristic of Reverse Diode

Fig 6. Gate Threshold Voltage v.s. Junction Temperature

N-Channel MOSFET AP2322GN-HF (KP2322GN-HF)

■ Typical Characteristics

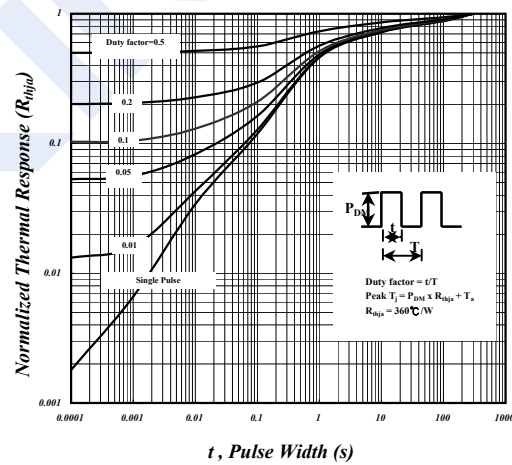
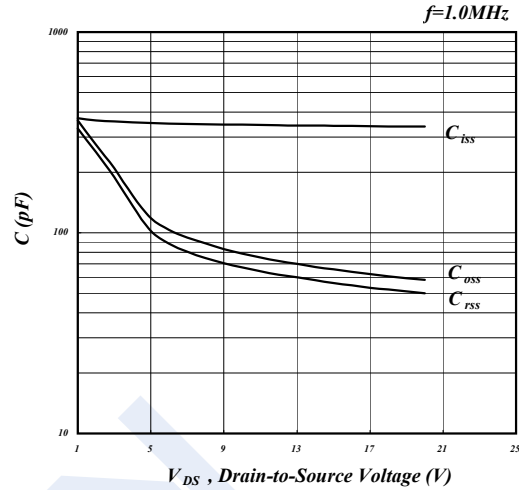
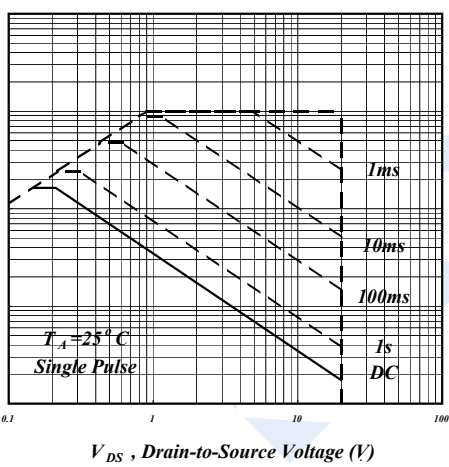
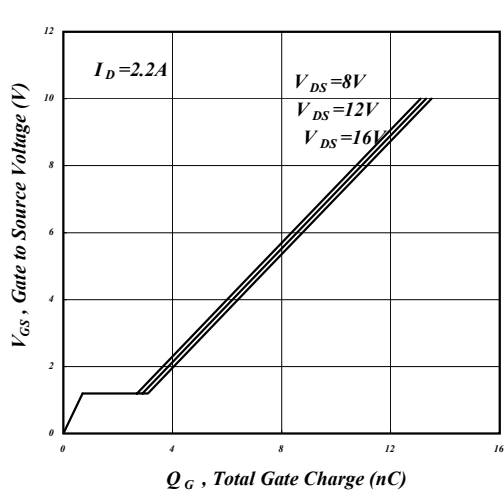


Fig 9. Maximum Safe Operating Area

Fig 10. Effective Transient Thermal Impedance

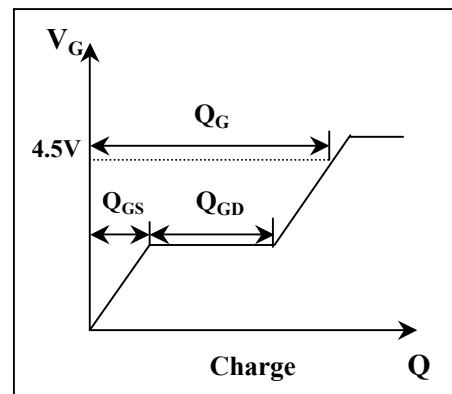
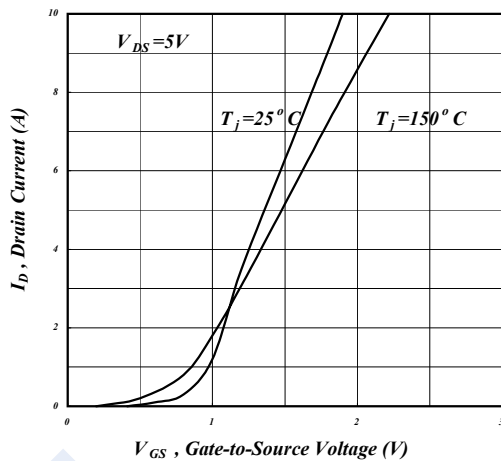


Fig 11. Transfer Characteristics

Fig 12. Gate Charge Circuit