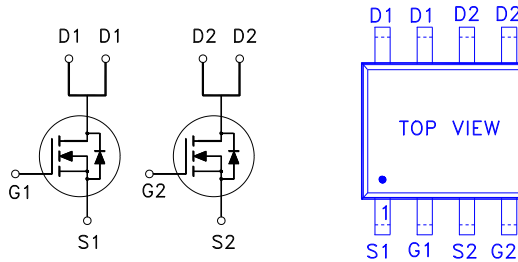


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
80	80mΩ	4A



G : GATE
D : DRAIN
S : SOURCE

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ °C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	80	V
Gate-Source Voltage		V_{GS}	±25	V
Continuous Drain Current	$T_A = 25\text{ °C}$	I_D	4	A
	$T_A = 70\text{ °C}$		3	
Pulsed Drain Current ¹		I_{DM}	20	
Avalanche Current		I_{AS}	23	
Avalanche Energy	L = 0.1mH	E_{AS}	26	mJ
Power Dissipation	$T_A = 25\text{ °C}$	P_D	1.9	W
	$T_A = 70\text{ °C}$		1.2	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	°C
Lead Temperature (¹ / ₁₆ " from case for 10 sec.)		T_L	275	

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		65	°C / W
Junction-to-Lead	$R_{\theta JL}$		25	°C / W

¹Pulse width limited by maximum junction temperature.

ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ °C}$, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	80			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	2.0	3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 25V$			±100	nA

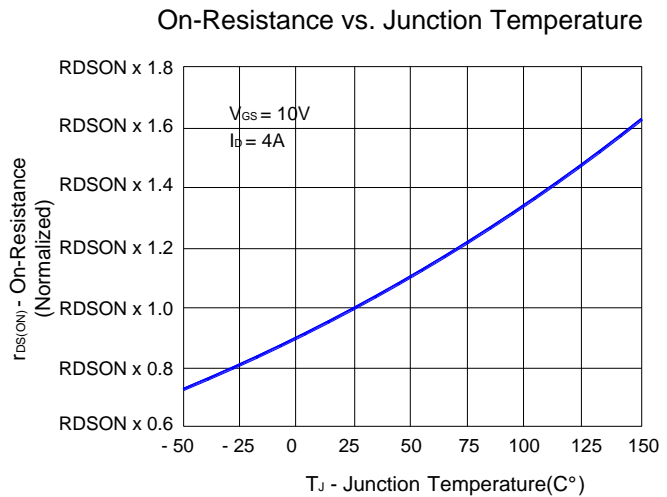
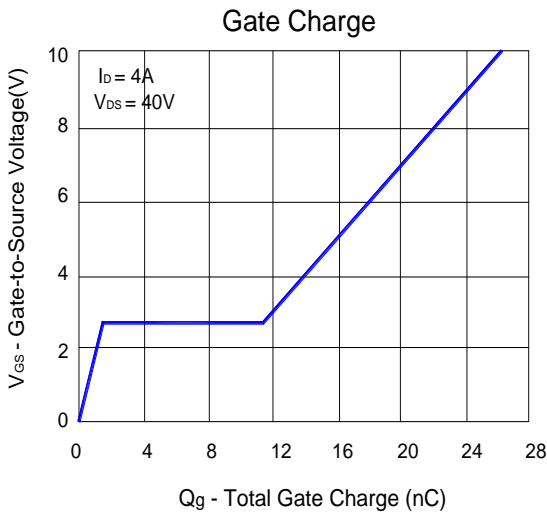
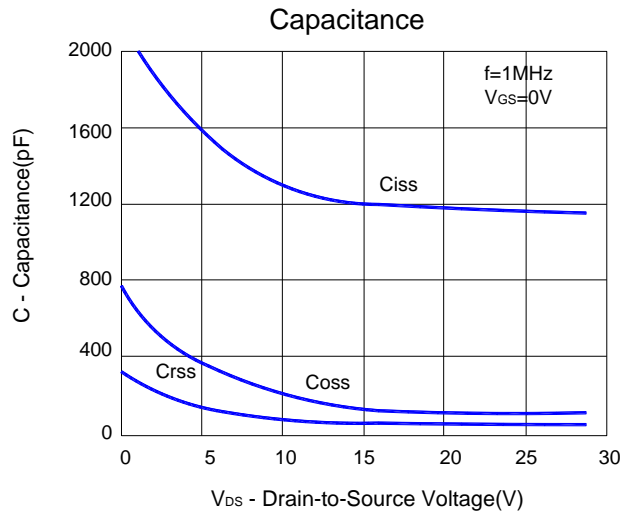
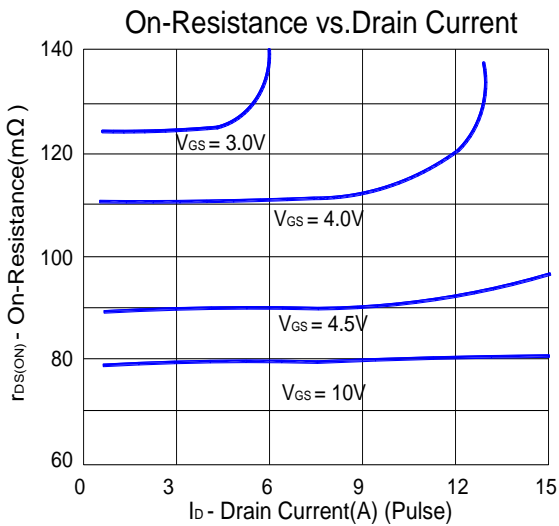
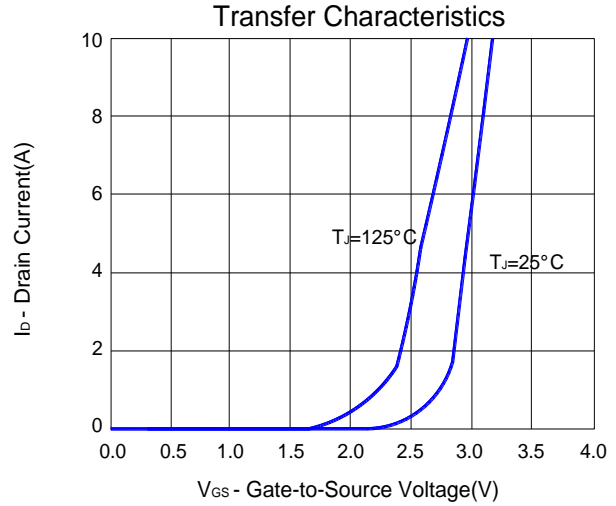
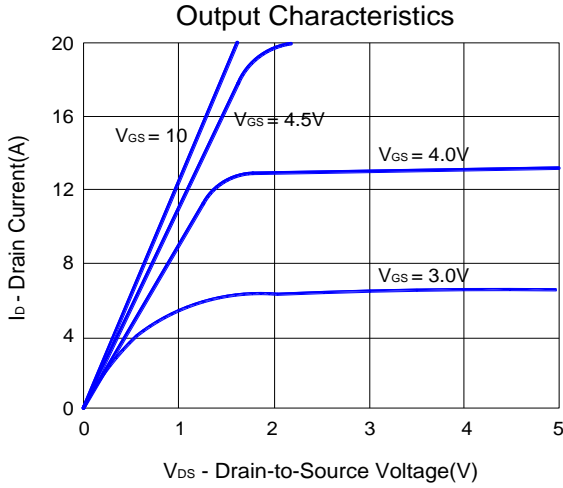
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 64V, V_{GS} = 0V$			1	μA
		$V_{DS} = 64V, V_{GS} = 0V, T_J = 70\text{ }^\circ C$			10	
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 5V, V_{GS} = 10V$	20			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 1A$		70	90	$m\Omega$
		$V_{GS} = 10V, I_D = 3A$		60	80	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 10V, I_D = 4A$		7.5		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		1165	1400	pF
Output Capacitance	C_{oss}			104		
Reverse Transfer Capacitance	C_{rss}			57		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		1.5	1.8	Ω
Total Gate Charge ² (10V)	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = 10V,$ $I_D = 4A$		29		nC
Total Gate Charge ² (4.5V)	Q_g			12		
Gate-Source Charge ²	Q_{gs}			2.0		
Gate-Drain Charge ²	Q_{gd}			6.8		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 0.5V_{(BR)DSS}, R_L = 40\Omega$ $I_D \cong 4A, V_{GS} = 10V, R_G = 3.3\ \Omega$		6.0		nS
Rise Time ²	t_r			3.8		
Turn-Off Delay Time ²	$t_{d(off)}$			21		
Fall Time ²	t_f			5.0		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS						
Continuous Current	I_S				4	A
Pulsed Current ³	I_{SM}				20	
Forward Voltage ¹	V_{SD}	$I_F = 1A, V_{GS} = 0V$		1	1.3	V
Reverse Recovery Time	t_{rr}	$I_F = I_S, di_F/dt = 100A / \mu S$		30		nS
Reverse Recovery Charge	Q_{rr}			40		nC

¹Pulse test : Pulse Width $\leq 300\ \mu sec$, Duty Cycle $\leq 2\%$.

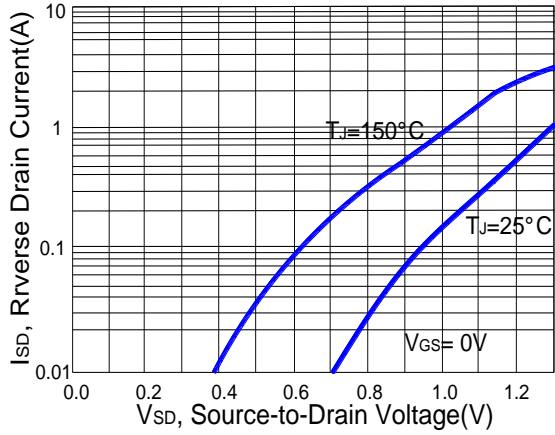
²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

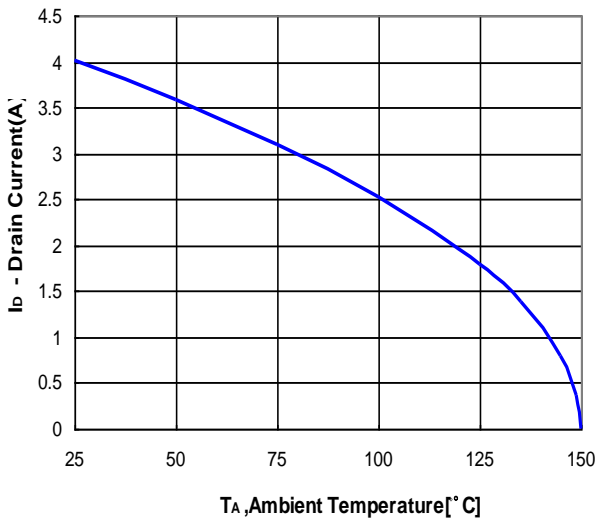
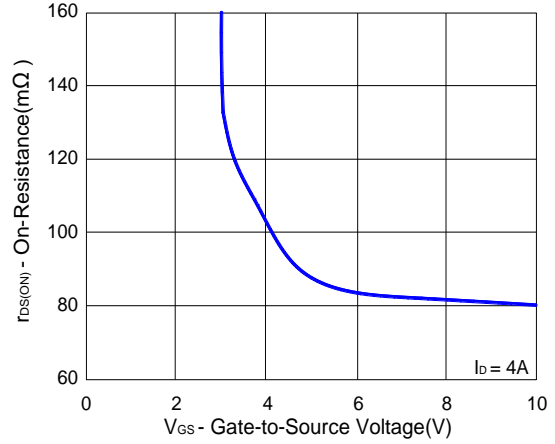
REMARK: THE PRODUCT MARKED WITH "P8008HV", DATE CODE or LOT #



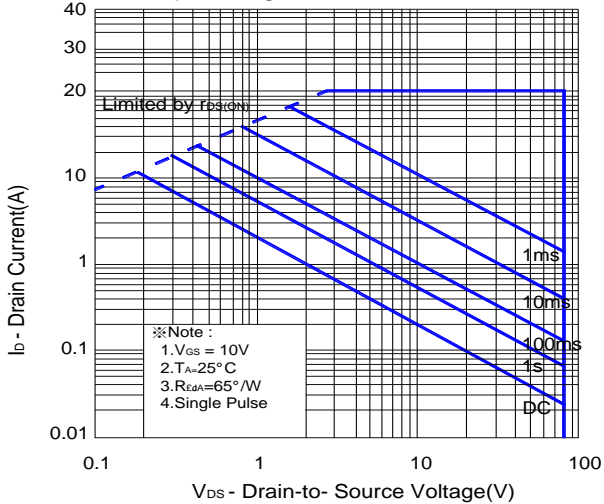
Typical Source-Drain Diode Forward Voltage



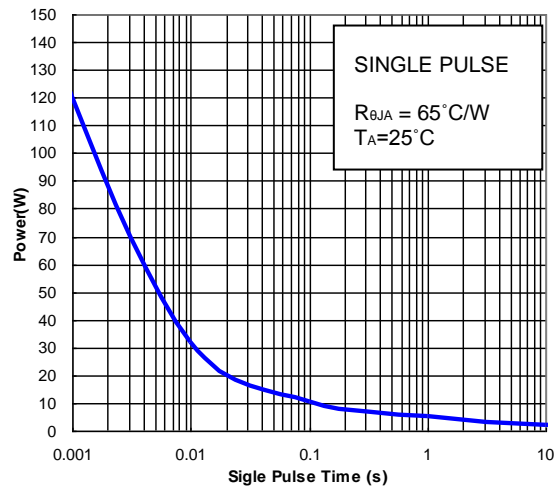
On-Resistance vs. Gate-to-Source Voltage

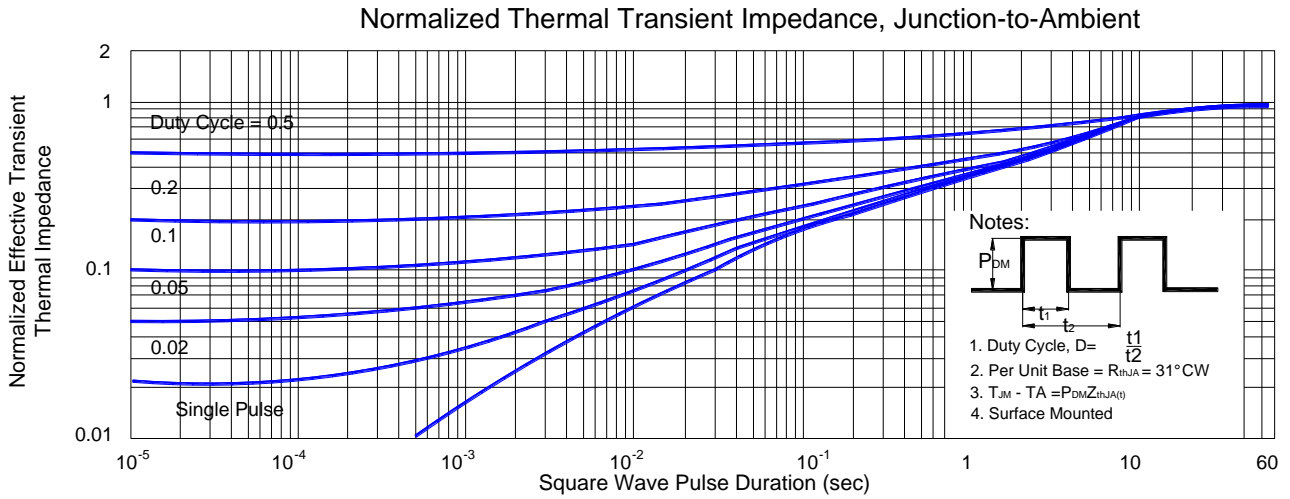


Safe Operating Area, Junction-to-Case



Single Pulse Maximum Power dissipation





SOIC-8 (D) MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8		5.0	H	0.4		1.27
B	3.8		4.0	I	0.18		0.25
C	5.8		6.2	J		0.22	
D	0.35		0.48	K	0°		8°
E		1.27		L			
F			1.65	M			
G	0.1		0.25	N			

