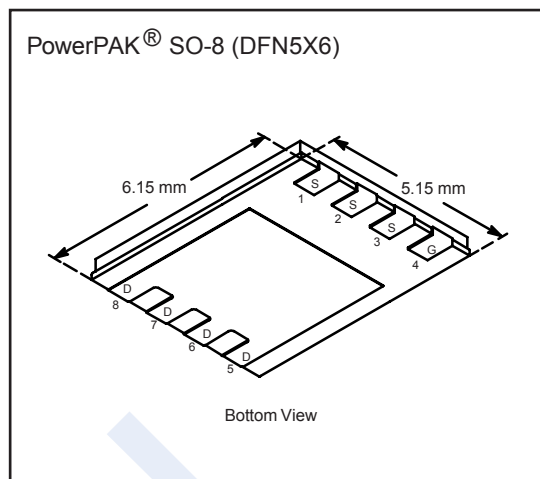
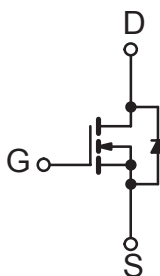


N-Channel MOSFET

SI7898DP (KI7898DP)

■ Features

- $V_{DS} (V) = 150V$
- $I_D = 4.8 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 87m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 98m\Omega$ ($V_{GS} = 4.5V$)



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

Parameter	Symbol	10s	Steady State	Unit
Drain-Source Voltage	V_{DS}	150		V
Gate-Source Voltage	V_{GS}	± 20		
Continuous Drain Current	I_D	4.8	3	A
		3.8	2.4	
Pulsed Drain Current	I_{DM}	25		
Avalanche Current	I_{AS}	10		
Power Dissipation	P_D	5	1.9	W
		3.2	1.2	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	25	65	$^\circ C/W$
Thermal Resistance.Junction- to-Case	R_{thJC}	-	2.6	
Soldering Recommendations (Peak Temperature)		260		$^\circ C$
Junction Temperature	T_J	150		
Storage Temperature Range	T_{stg}	-55 to 150		

N-Channel MOSFET

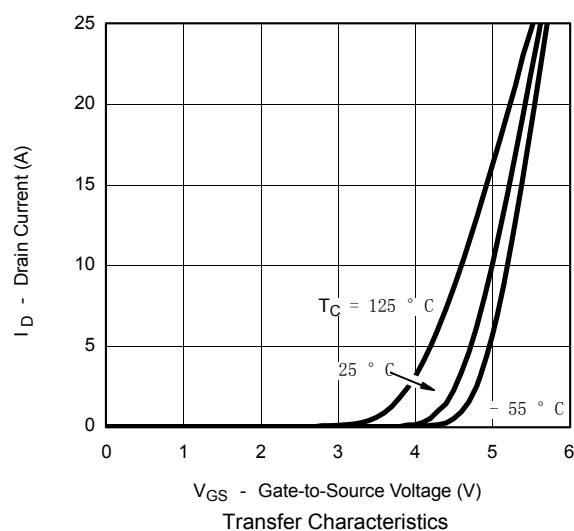
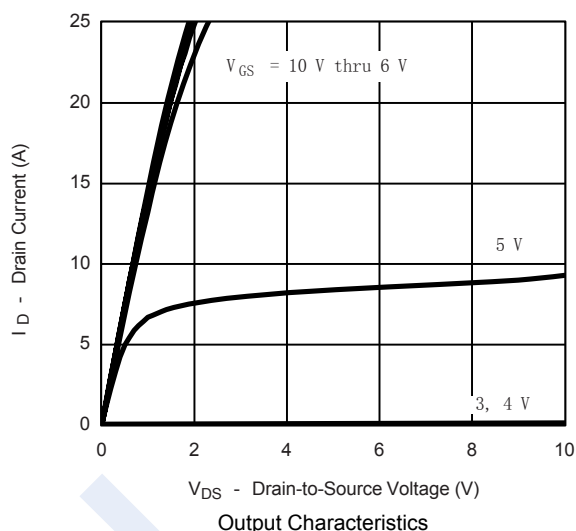
SI7898DP (KI7898DP)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\mu A$, $V_{GS}=0V$	150			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=150V$, $V_{GS}=0V$			1	μA
		$V_{DS}=150V$, $V_{GS}=0V$, $T_J=55^\circ C$			5	
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V$, $V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$, $I_D=3.5A$ (Note.1)			87	m Ω
		$V_{GS}=6V$, $I_D=3A$ (Note.1)			98	
On State Drain Current	$I_{D(on)}$	$V_{GS}=10V$, $V_{DS}=5V$ (Note.1)	25			A
Forward Transconductance	g_{FS}	$V_{DS}=15V$, $I_D=5A$ (Note.1)		15		S
Gate Resistance	R_g	$V_{GS}=0V$, $V_{DS}=0V$, $f=1MHz$	0.5		2.5	Ω
Total Gate Charge	Q_g	$V_{GS}=10V$, $V_{DS}=75V$, $I_D=3.5A$			21	nC
Gate Source Charge	Q_{gs}			3.2		
Gate Drain Charge	Q_{gd}			6		
Turn-On DelayTime	$t_{d(on)}$	$V_{DD}=75V$, $R_L=21\Omega$ $I_D=3.5A$, $V_{GEN}=10V$, $R_g=6\Omega$			14	ns
Turn-On Rise Time	t_r				15	
Turn-Off DelayTime	$t_{d(off)}$				35	
Turn-Off Fall Time	t_f				25	
Body Diode Reverse Recovery Time	t_{rr}	$I_F=2.5A$, $dI/dt=100A/\mu s$			70	
Continuous Source Current	I_S				2.5	A
Diode Forward Voltage	V_{SD}	$I_S=2.5A$, $V_{GS}=0V$			1.2	V

Note.1:Pulse test; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

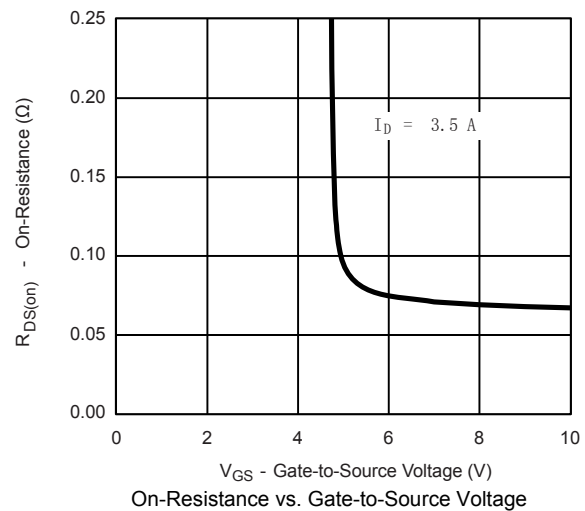
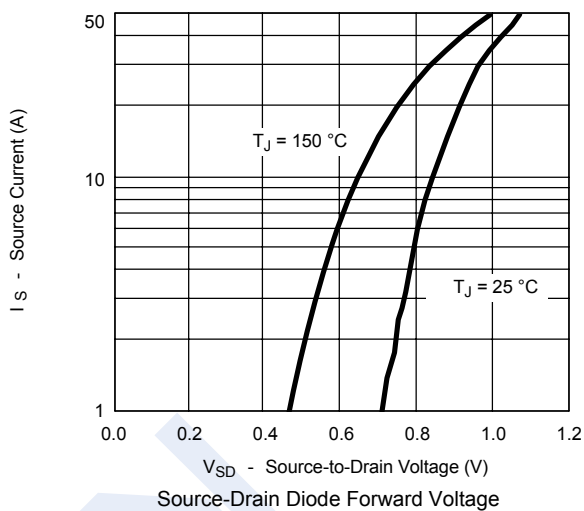
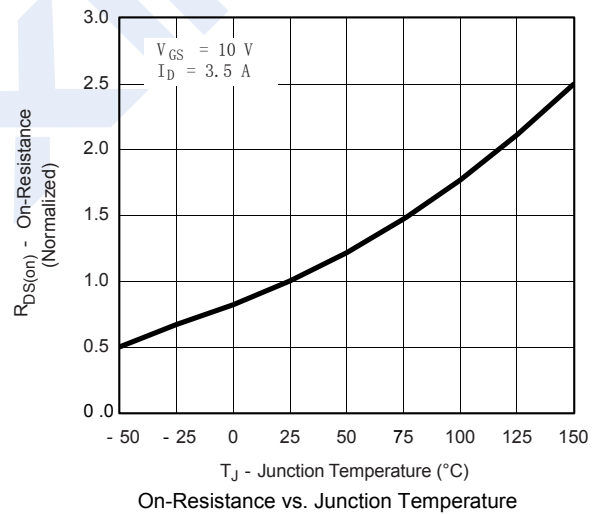
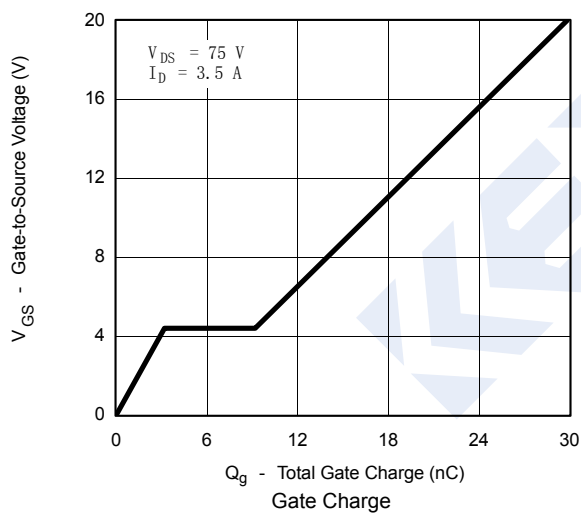
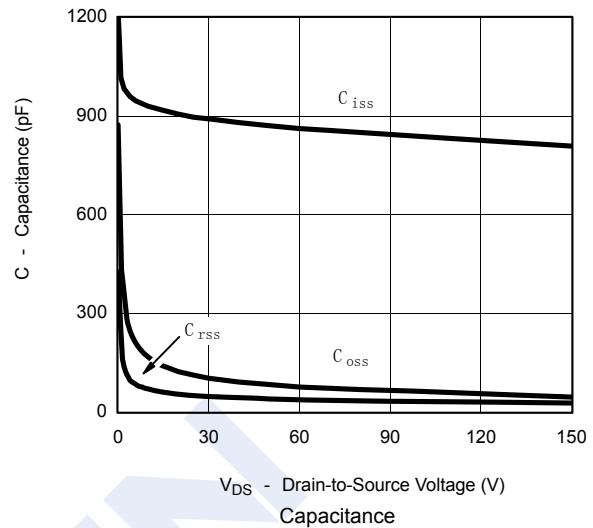
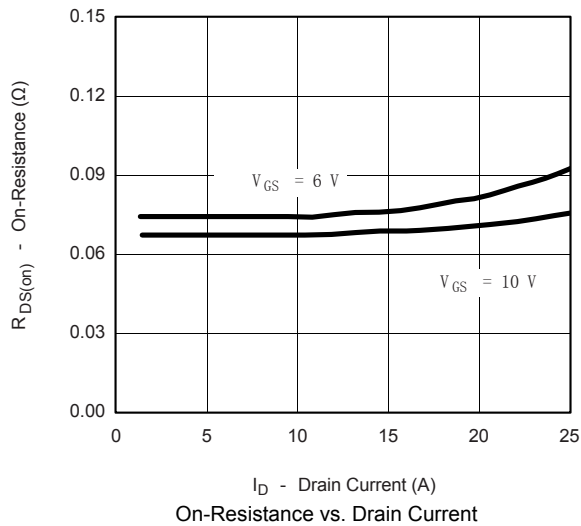
■ Typical Characteristics



N-Channel MOSFET

SI7898DP (KI7898DP)

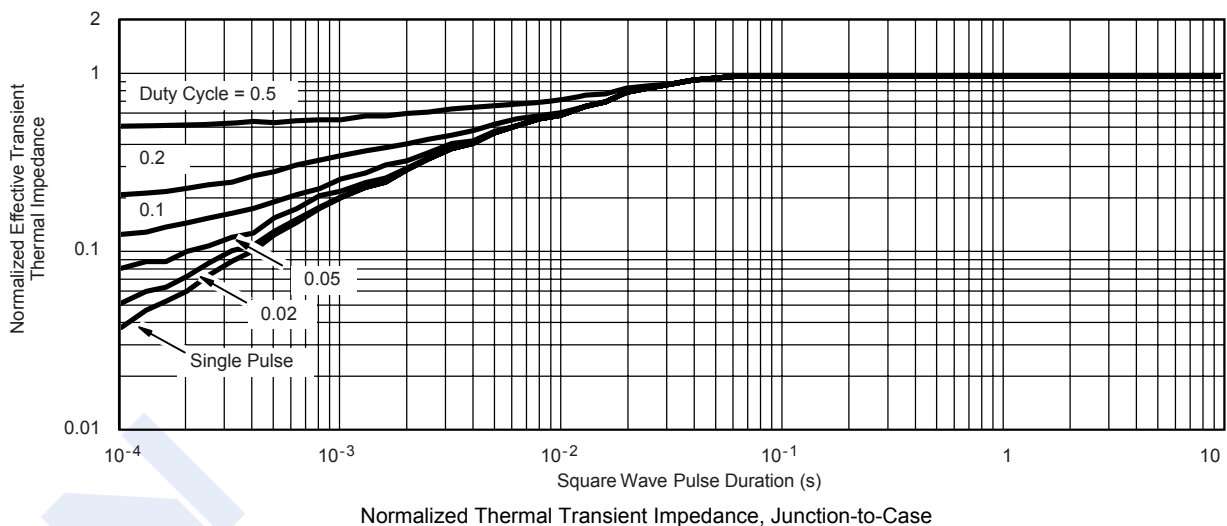
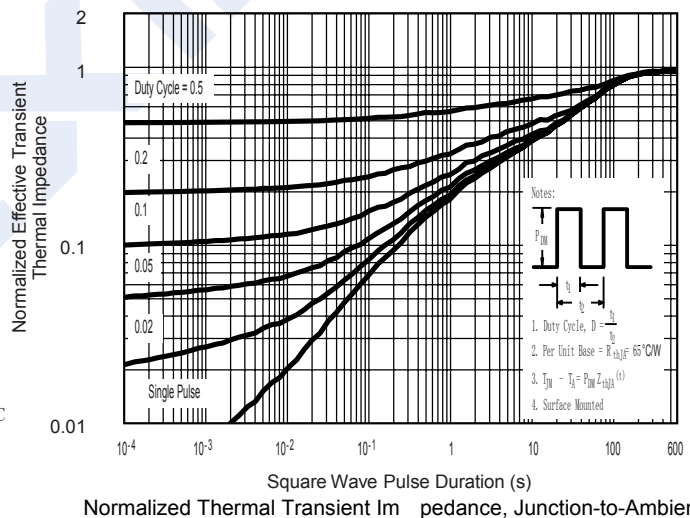
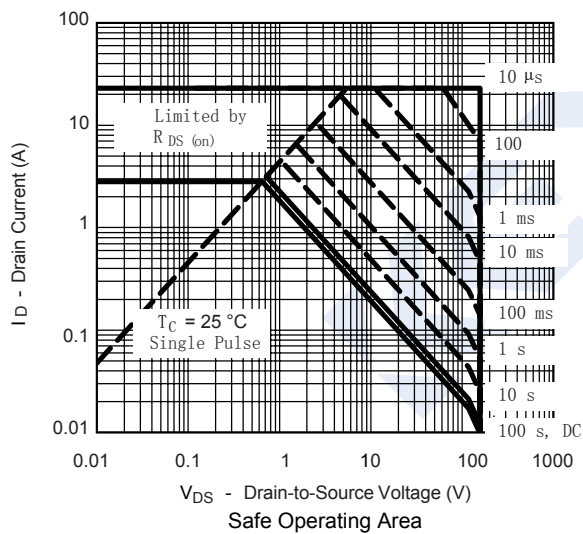
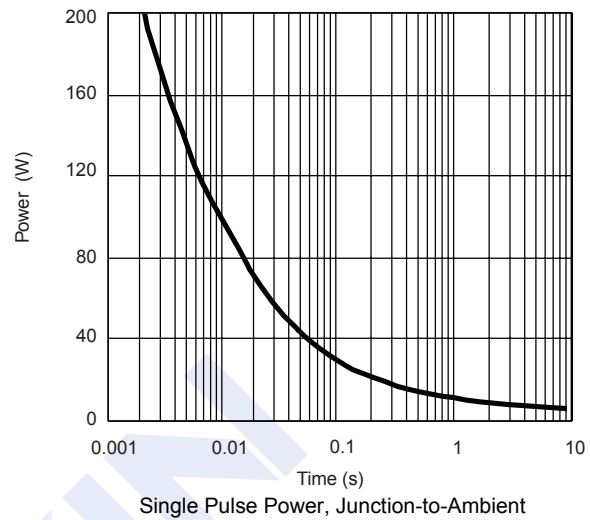
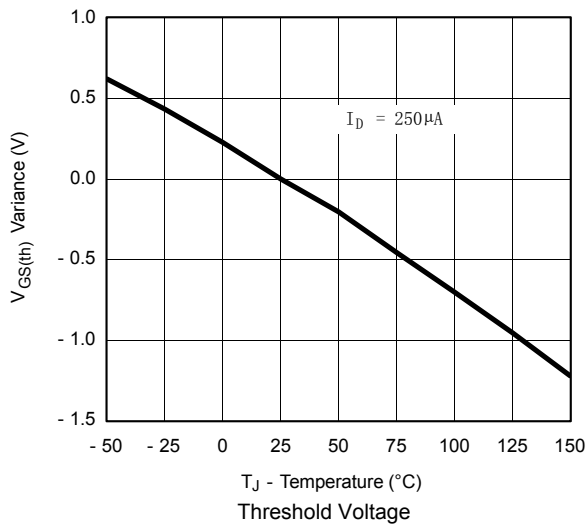
■ Typical Characteristics

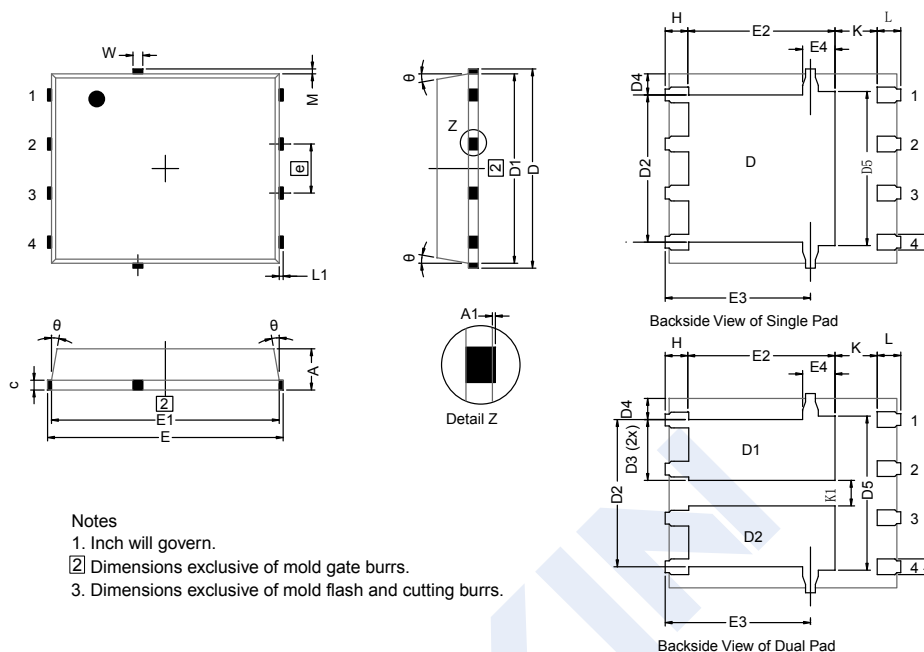


N-Channel MOSFET

SI7898DP (KI7898DP)

■ Typical Characteristics



PowerPAK[®] SO-8(DFN5X6), (Single/Dual)

DIM.	MILLIMETERS			INCHES		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.97	1.04	1.12	0.038	0.041	0.044
A1		-	0.05	0	-	0.002
b	0.33	0.41	0.51	0.013	0.016	0.020
c	0.23	0.28	0.33	0.009	0.011	0.013
D	5.05	5.15	5.26	0.199	0.203	0.207
D1	4.80	4.90	5.00	0.189	0.193	0.197
D2	3.56	3.76	3.91	0.140	0.148	0.154
D3	1.32	1.50	1.68	0.052	0.059	0.066
D4	0.57 typ.			0.0225 typ.		
D5	3.98 typ.			0.157 typ.		
E	6.05	6.15	6.25	0.238	0.242	0.246
E1	5.79	5.89	5.99	0.228	0.232	0.236
E2 (for AL product)	3.30	3.48	3.66	0.130	0.137	0.144
E2 (for other product)	3.48	3.66	3.84	0.137	0.144	0.151
E3	3.68	3.78	3.91	0.145	0.149	0.154
E4 (for AL product)	0.58 typ.			0.023 typ.		
E4 (for other product)	0.75 typ.			0.030 typ.		
e	1.27 BSC			0.050 BSC		
K (for AL product)	1.45 typ.			0.057 typ.		
K (for other product)	1.27 typ.			0.050 typ.		
K1	0.56	-	-	0.022	-	-
H	0.51	0.61	0.71	0.020	0.024	0.028
L	0.51	0.61	0.71	0.020	0.024	0.028
L1	0.06	0.13	0.20	0.002	0.005	0.008
theta	0°	-	12°	0°	-	12°
W	0.15	0.25	0.36	0.006	0.010	0.014
M	0.125 typ.			0.005 typ.		