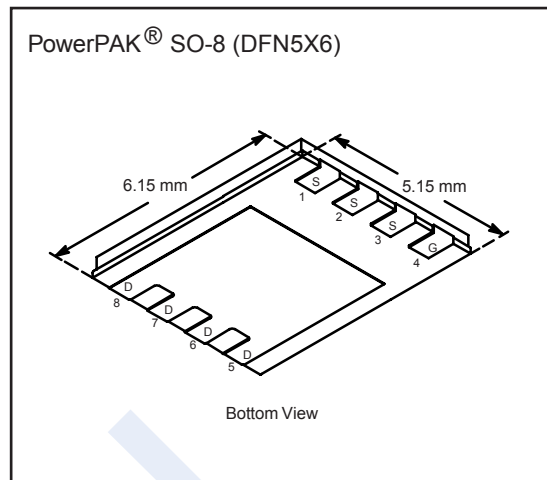
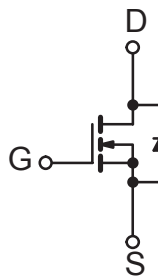


N-Channel MOSFET

SI7898DP (KI7898DP)

■ Features

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



■ 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	$T_a=25^\circ C$	4.8	3	A
		$T_a=70^\circ C$	3.8	2.4	
Pulsed Drain Current	I_{DM}	25			
Avalanche Current	I_{AS}	10		W	
Power Dissipation	P_D	$T_a=25^\circ C$	5		1.9
		$T_a=70^\circ C$	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

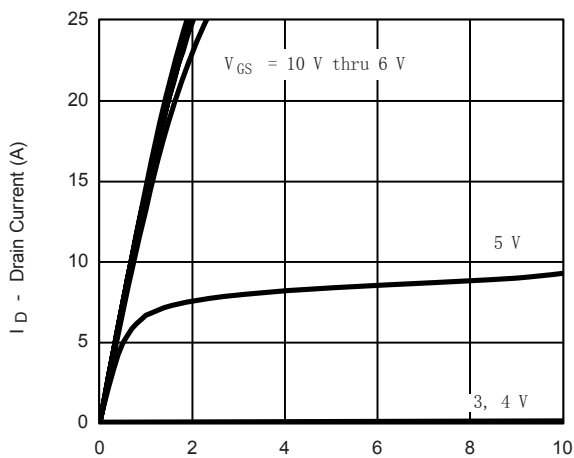
SI7898DP (KI7898DP)

■ Electrical Characteristics Ta = 25°C

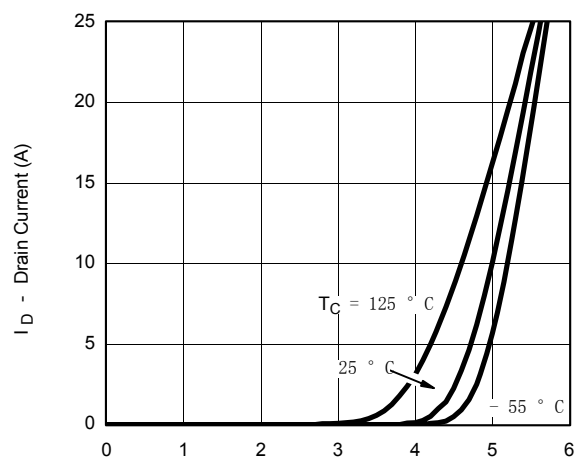
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	150			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =150V, V _{GS} =0V			1	μA
		V _{DS} =150V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	2		4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.5A (Note.1)			87	mΩ
		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 Delay Time	t _{d(on)}	V _{DD} = 75 V, R _L = 21 Ω I _D = 3.5 A, V _{GEN} = 10 V, R _g = 6 Ω			14	ns
Turn-On Rise Time	t _r				15	
Turn-Off Delay Time	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/μs			
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 ≤ 300 μs, duty cycle ≤ 2 %.

■ Typical Characteristics



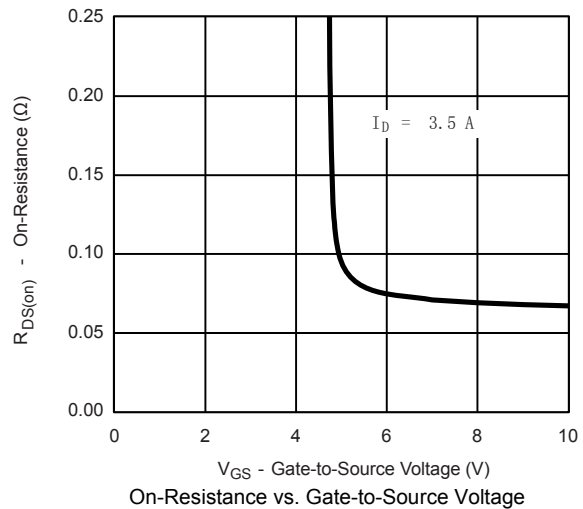
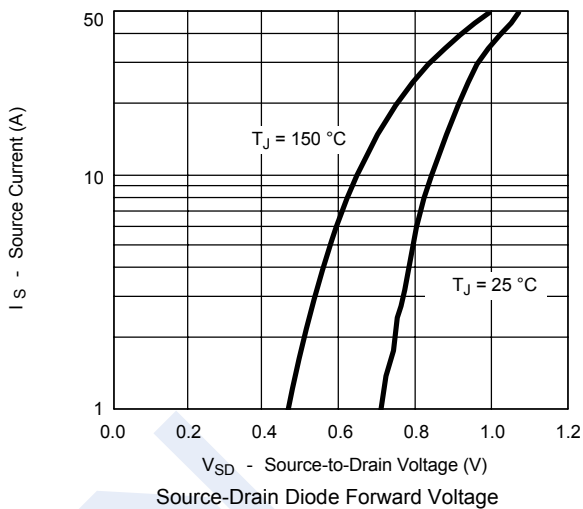
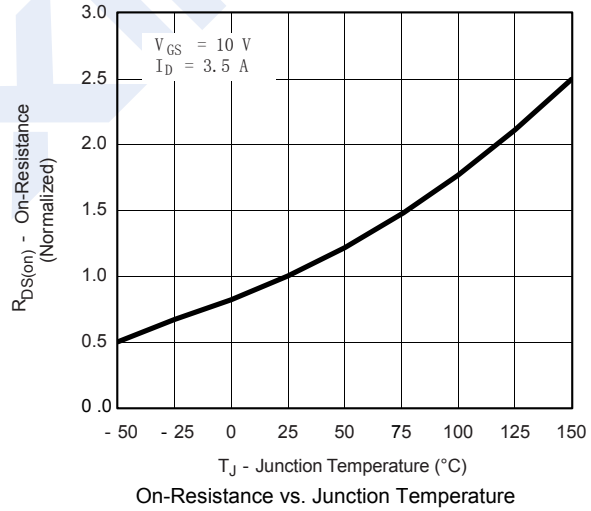
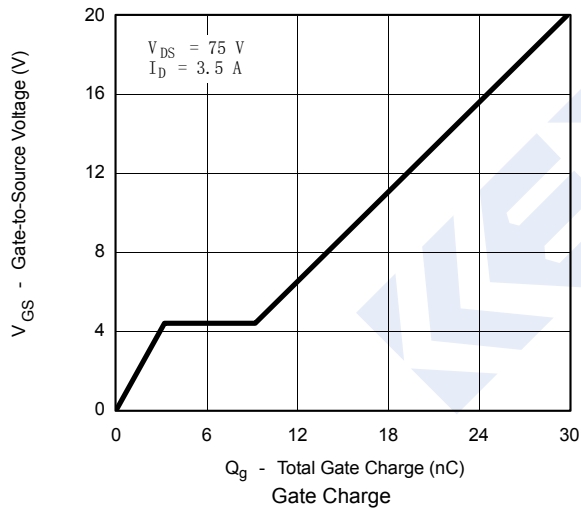
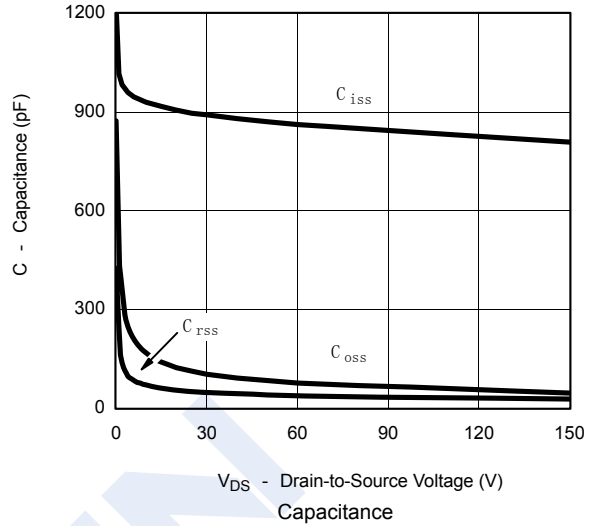
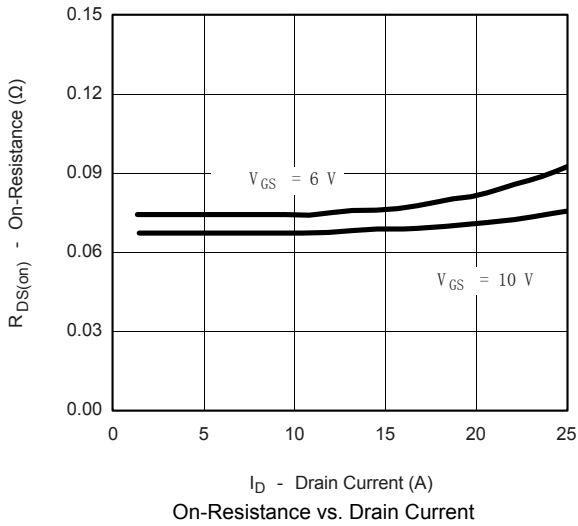
Output Characteristics



Transfer Characteristics

N-Channel MOSFET SI7898DP (KI7898DP)

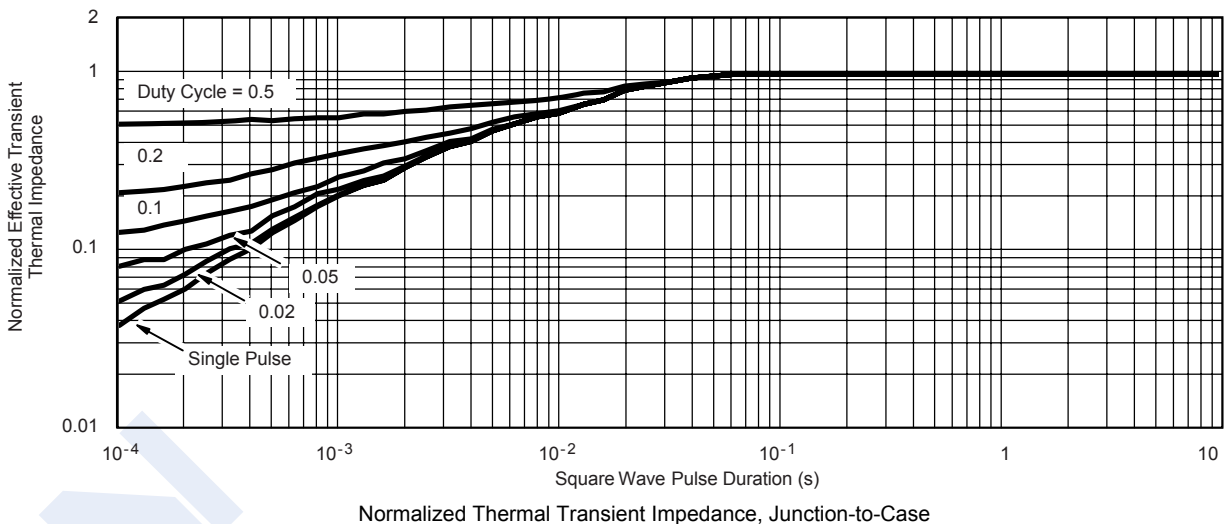
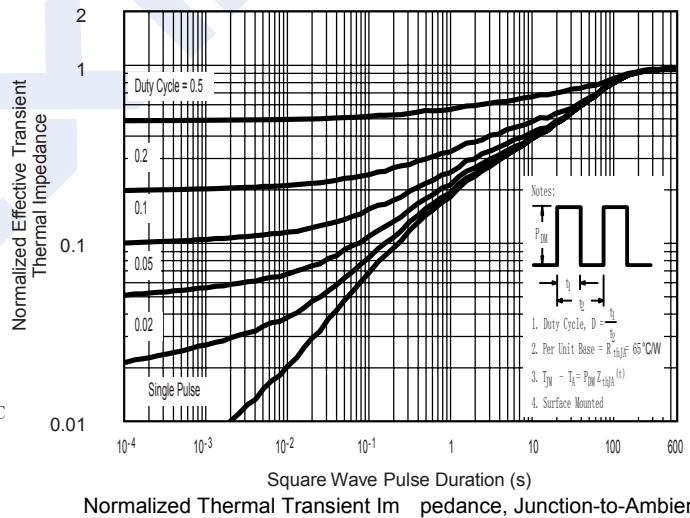
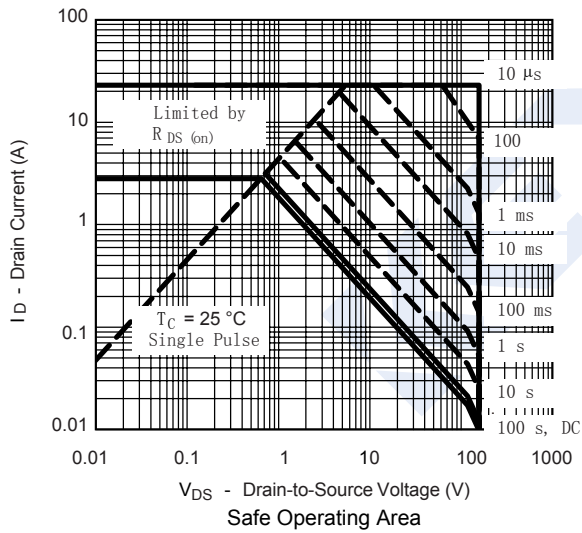
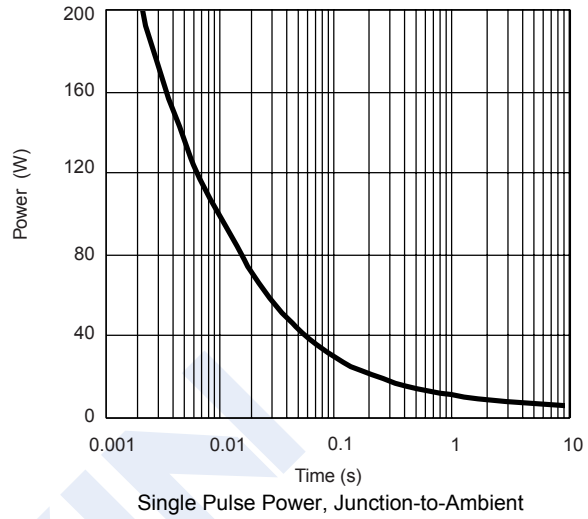
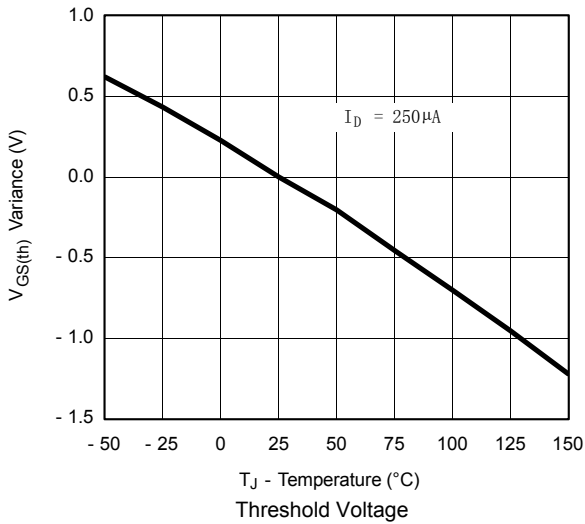
Typical Characteristics

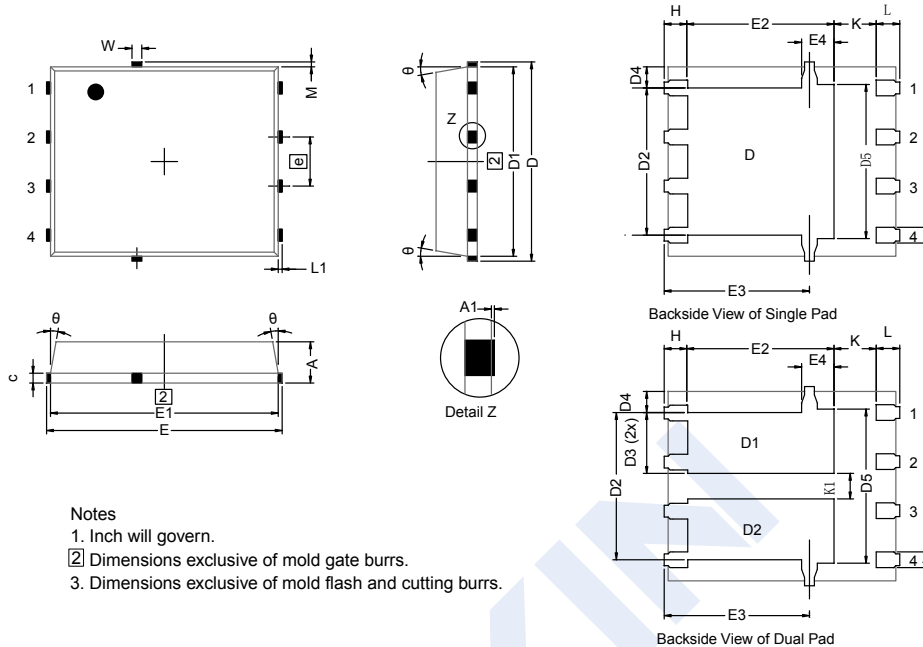


N-Channel MOSFET

SI7898DP (KI7898DP)

■ Typical Characteristics



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

Notes

1. Inch will govern.
2. Dimensions exclusive of mold gate burrs.
3. Dimensions exclusive of mold flash and cutting burrs.

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.		