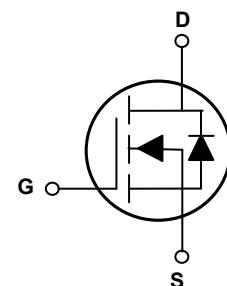
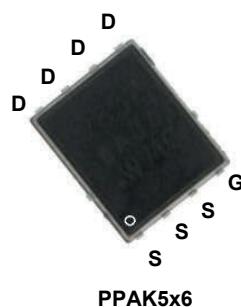


Main Product Characteristics

BV _{DSS}	80V
R _{DS(ON)}	7.2mΩ (Max)
I _D	75A



Features and Benefits

- Advanced MOSFET process technology
- Ideal for high efficiency switched mode power supplies
- Low on-resistance with low gate charge
- Fast switching and reverse body recovery



Description

The GSFP8982 utilizes the latest techniques to achieve high cell density and low on-resistance. These features make this device extremely efficient and reliable for use in high efficiency switch mode power supplies and a wide variety of other applications.

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Drain-Source Voltage	V _{DS}	80	V
Gate-Source Voltage	V _{GS}	±20	V
Drain Current - Continuous ($T_C=25^\circ\text{C}$)	I _D	75	A
Drain Current - Continuous ($T_C=100^\circ\text{C}$)		48	A
Drain Current - Pulsed ¹	I _{DM}	300	A
Power Dissipation ($T_C=25^\circ\text{C}$)	P _D	98	W
Power Dissipation (Derate above 25°C)		0.78	W/°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Operating Junction Temperature Range	T _J	-55 to +150	°C
Max Thermal Resistance Junction to Ambient	R _{θJA}	62	°C/W
Max Thermal Resistance Junction to Case	R _{θJC}	1.27	°C/W

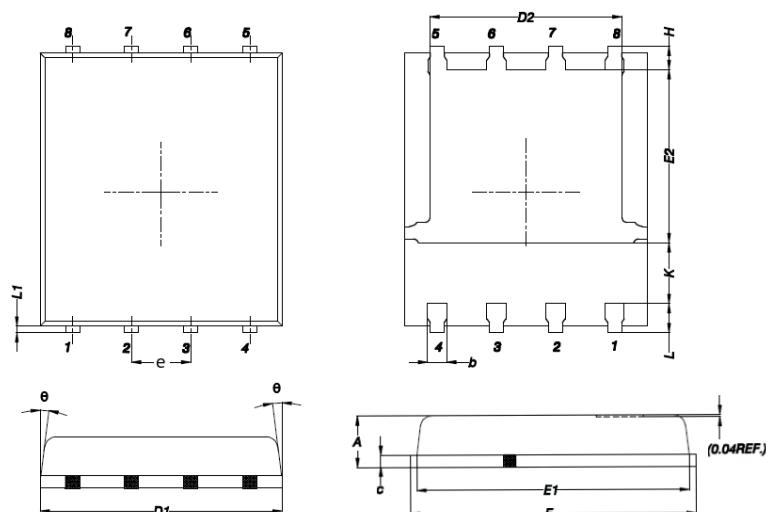
Electrical Characteristics ($T_J=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
On / Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$\text{V}_{\text{GS}}=0\text{V}, \text{I}_D=250\mu\text{A}$	80	-	-	V
Drain-Source Leakage Current	I_{DSS}	$\text{V}_{\text{DS}}=80\text{V}, \text{V}_{\text{GS}}=0\text{V}, \text{T}_J=25^\circ\text{C}$	-	-	1	μA
		$\text{V}_{\text{DS}}=64\text{V}, \text{V}_{\text{GS}}=0\text{V}, \text{T}_J=85^\circ\text{C}$	-	-	10	μA
Gate-Source Leakage Current	I_{GSS}	$\text{V}_{\text{GS}}=\pm 20\text{V}, \text{V}_{\text{DS}}=0\text{V}$	-	-	± 100	nA
Static Drain-Source On-Resistance	$\text{R}_{\text{DS(ON)}}$	$\text{V}_{\text{GS}}=10\text{V}, \text{I}_D=10\text{A}$	-	6	7.2	$\text{m}\Omega$
Gate Threshold Voltage	$\text{V}_{\text{GS(th)}}$	$\text{V}_{\text{GS}}=\text{V}_{\text{DS}}, \text{I}_D=250\mu\text{A}$	2	3	4	V
Dynamic and Switching Characteristics						
Total Gate Charge ^{2,3}	Q_g	$\text{V}_{\text{DS}}=40\text{V}, \text{V}_{\text{GS}}=10\text{V}, \text{I}_D=40\text{A}$	-	25	-	nC
Gate-Source Charge ^{2,3}	Q_{gs}		-	7	-	
Gate-Drain Charge ^{2,3}	Q_{gd}		-	10	-	
Turn-On Delay Time ^{2,3}	$\text{t}_{\text{d(on)}}$	$\text{V}_{\text{DD}}=40\text{V}, \text{V}_{\text{GS}}=10\text{V}, \text{R}_G=6\Omega, \text{I}_D=40\text{A}$	-	20	-	ns
Rise Time ^{2,3}	t_r		-	15	-	
Turn-Off Delay Time ^{2,3}	$\text{t}_{\text{d(off)}}$		-	40	-	
Fall Time ^{2,3}	t_f		-	30	-	
Input Capacitance	C_{iss}	$\text{V}_{\text{DS}}=40\text{V}, \text{V}_{\text{GS}}=0\text{V}, \text{F}=1\text{MHz}$	-	1560	-	pF
Output Capacitance	C_{oss}		-	350	-	
Reverse Transfer Capacitance	C_{rss}		-	15	-	
Gate Resistance	R_g	$\text{V}_{\text{GS}}=0\text{V}, \text{V}_{\text{DS}}=0\text{V}, \text{F}=1\text{MHz}$	-	1.1	-	Ω
Source-Drain Ratings and Characteristics						
Continuous Source Current	I_s	$\text{V}_G=\text{V}_D=0\text{V}, \text{Force Current}$	-	-	75	A
Pulsed Source Current	I_{SM}		-	-	150	A
Diode Forward Voltage	V_{SD}	$\text{V}_{\text{GS}}=0\text{V}, \text{I}_s=1\text{A}, \text{T}_J=25^\circ\text{C}$	-	-	1	V

Notes

1. Repetitive rating: pulsed width limited by maximum junction temperature.
2. The data tested by pulsed, pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.
3. Essentially independent of operating temperature.

Package Outline Dimensions (PPAK5x6)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.85	1.20	0.031	0.047
b	0.30	0.51	0.012	0.020
C	0.20	0.30	0.008	0.012
D1	4.80	5.40	0.189	0.212
D2	3.61	4.31	0.142	0.170
E	5.85	6.30	0.230	0.248
E1	5.45	5.96	0.215	0.235
E2	3.30	3.92	0.130	0.154
e	1.27 BSC		0.050 BSC	
H	0.38	0.65	0.015	0.026
K	1.10	-	0.043	-
L	0.38	0.71	0.015	0.028
L1	0.05	0.25	0.002	0.009
θ	0°	12°	0°	12°

Recommended Pad Layout

