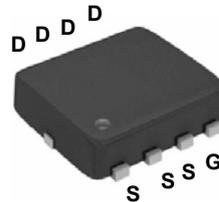
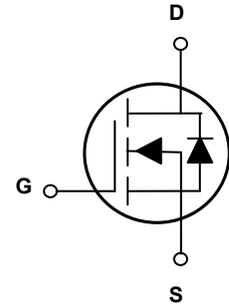


Main Product Characteristics

$V_{(BR)DSS}$	100V
$R_{DS(ON)}$	115mΩ
I_D	10A



PPAK3X3



Schematic Diagram

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 GSFN0956 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 supply and a wide variety of other applications.

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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current – Continuous ($T_C=25^{\circ}C$)	I_D	10	A
Drain Current – Continuous ($T_C=100^{\circ}C$)		6.3	A
Drain Current – Pulsed ¹	I_{DM}	40	A
Single Pulse Avalanche Energy ²	E_{AS}	6	mJ
Single Pulse Avalanche Current ²	I_{AS}	11	A
Power Dissipation ($T_C=25^{\circ}C$)	P_D	29.8	W
Power Dissipation – Derate above 25°C		0.24	W/°C
Storage Temperature Range	T_{STG}	-50 to +150	°C
Operating Junction Temperature Range	T_J	-50 to +150	°C

Thermal Characteristics

Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	---	62	°C/W
Thermal Resistance Junction to Case	$R_{\theta JC}$	---	4.2	°C/W

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

DUFUa YHf	Gra Vc`	7 cbX]hcbg	A]b"	Hnd"	AU "	I b]h
CZ7 \ UFUMYf]gh]Vg						
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Note:

1. Repetitive Rating: Pulsed width limited by maximum junction temperature.
2. $V_{DD}=25V, V_{GS}=10V, L=0.1mH, I_{AS}=11A, R_G=25\Omega, \text{Starting } T_J=25^{\circ}\text{C}.$
3. The data tested by pulsed, pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.
4. Essentially independent of operating temperature.

Typical Electrical and Thermal Characteristic Curves

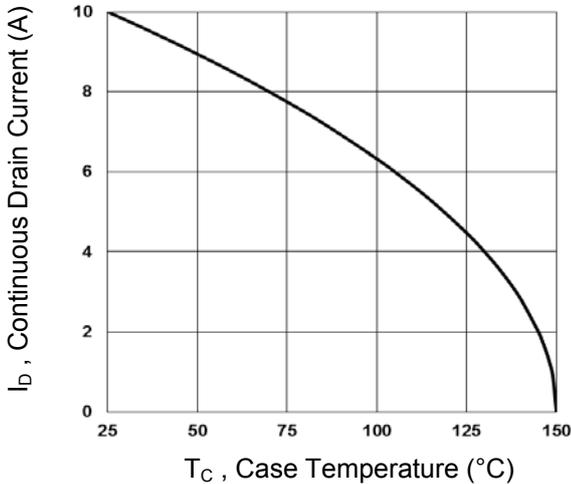


Fig.1 Continuous Drain Current vs. T_c

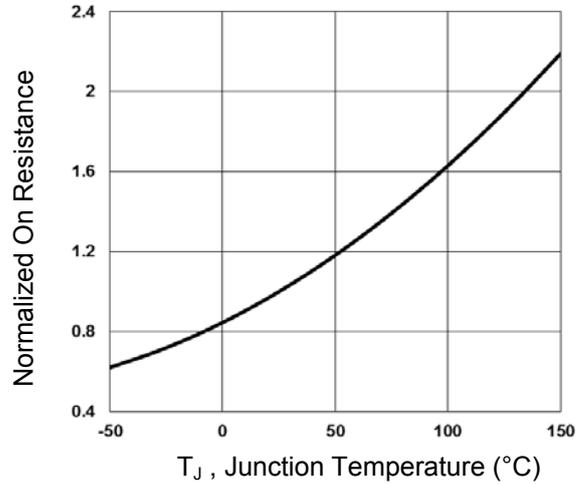


Fig.2 Normalized $R_{DS(ON)}$ vs. T_j

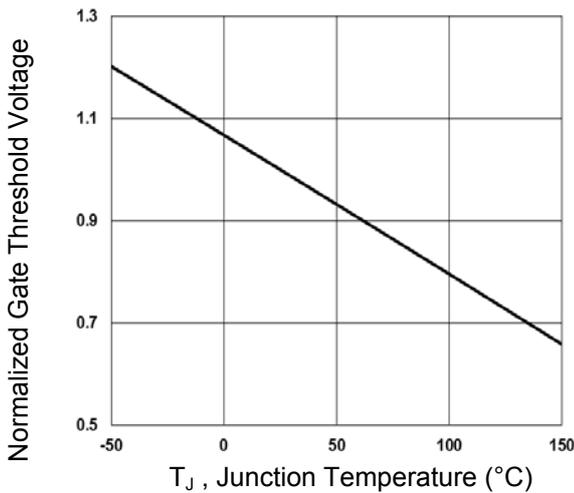


Fig.3 Normalized V_{th} vs. T_j

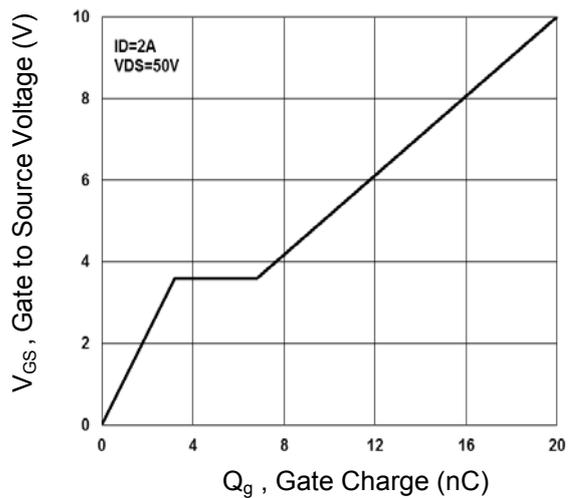


Fig.4 Gate Charge Waveform

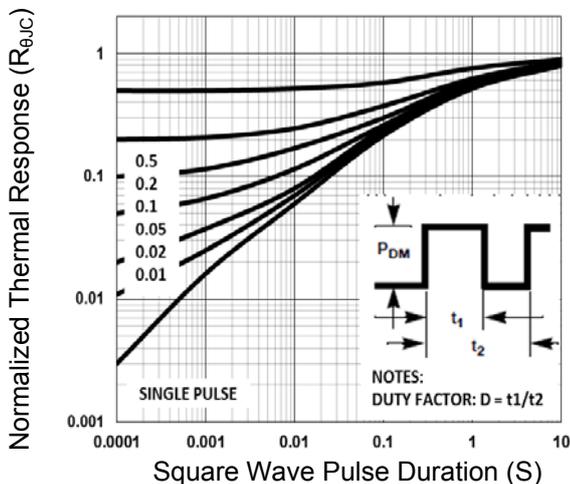


Fig.5 Normalized Transient Impedance

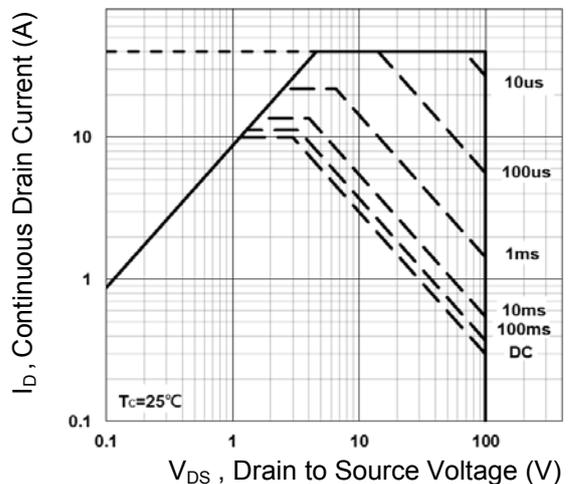


Fig.6 Maximum Safe Operation Area

Typical Electrical and Thermal Characteristic Curves

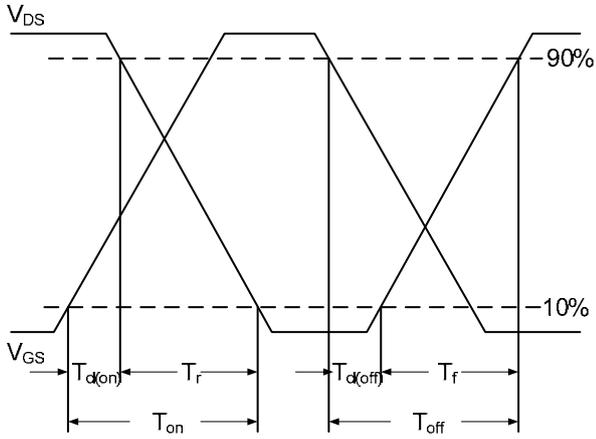


Fig.7 Switching Time Waveform

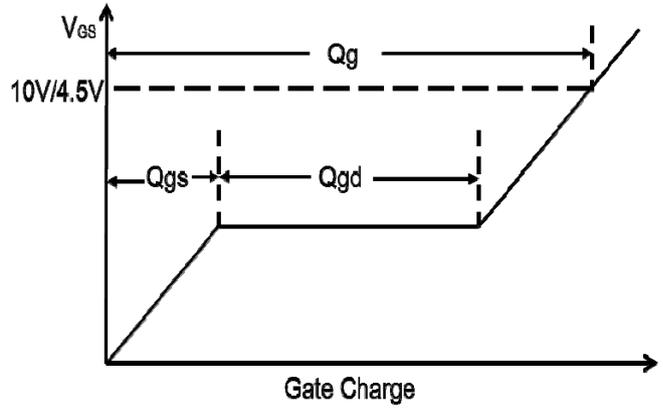
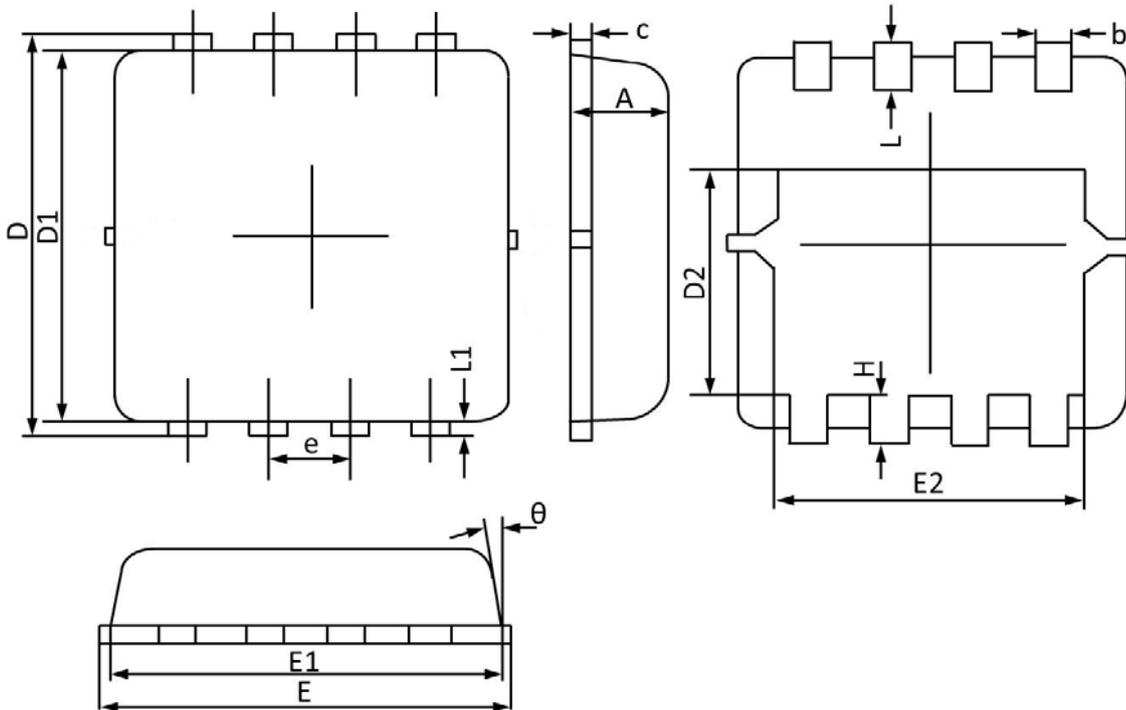


Fig.8 Gate Charge Waveform

Package Outline Dimensions

PPAK3X3



Gna Vc`	8 ja Ybg]cbg`b`A]`ja YHfg		8 ja Ybg]cbg`b`bW Yg	
	A 5 L	A-B	A 5 L	A-B
OE	EH	EH	EH	EH
à	EH	EH	EH	EH
&	EH	EH	EH	EH
O	EH	EH	EH	EH
OF	EH	EH	EH	EH
OG	EH	EH	EH	EH
O	EH	EH	EH	EH
OF	EH	EH	EH	EH
OG	EH	EH	EH	EH
^	EH O U O		EH O U O	
P	EH	EH	EH	EH
S	EH	EH	EH	EH
SF	EH	EH	EH	EH
	FG»	€»	FG»	€»