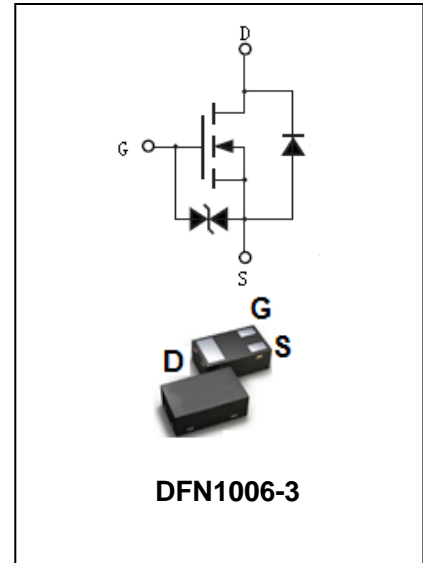




FEATURES

- Extremely low threshold voltage.
- ESD Protected.



ORDERING INFORMATION

Type No.	Marking	Package Code
LGE2231L	K21	DFN1006-3

MAXIMUM RATING @ Ta=25°C unless otherwise specified (Note 1)

Symbol	Parameter	Value	Units
V _{DSS}	Drain-Source voltage	20	V
V _{GSS}	Gate -Source voltage	± 10	V
I _D	Drain current (Continuous)	800	mA
I _{DM}	Drain Current (Pulsed) (Note 1)	1000	mA
P _D	Maximum Drain Current-Continue	450	mW
R _{θJA}	Thermal Resistance, Junction-to-Ambient	279	°C/W
T _J	Operating Junction Temperature	+150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C



ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	20	-	-	V
Gate-body Leakage	I_{GSS}	Forward $V_{DS}=0V, V_{GS}=8V$	-	-	10	μA
		Reverse $V_{DS}=0V, V_{GS}=-8V$	-	-	-10	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=16V, V_{GS}=0V$	-	-	1	μA
ON CHARACTERISTICS^(Note 2)						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.3	0.65	1.0	V
Static drain-Source on-resistance	$R_{DS(ON)}$	$V_{GS}=4.5V, I_D=0.5A$	-	280	400	$m\Omega$
		$V_{GS}=2.5V, I_D=0.2A$	-	350	650	
		$V_{GS}=1.8V, I_D=0.1A$	-	400	800	
		$V_{GS}=1.5V, I_D=0.05A$	-	500	1200	
		$V_{GS}=1.2V, I_D=0.02A$	-	700	3000	
DYNAMIC CHARACTERISTICS						
Total Gate Charge	Q_g	$V_{DS} = 10V$	-	1.4	-	nC
Gate-Source Charge	Q_{gs}	$I_D = 0.5A$	-	0.22	-	nC
Gate-Drain Charge	Q_{gd}	$V_{GS} = 4.5V,$	-	0.21	-	nC
Input capacitance	C_{ISS}	$V_{DS}=10V, V_{GS}=0V, f=1.0MHz$	-	67	-	pF
Output capacitance	C_{OSS}		-	19	-	
Reverse transfer capacitance	C_{RSS}		-	6	-	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$t_{D(ON)}$	$V_{DD} = 10V,$ $I_D = 150mA$ $V_{GEN} = 4V$ $R_{GEN} = 10\Omega$	-	2.8	-	ns
Turn-On Rise Time	t_r		-	20	-	
Turn-Off Delay Time	$t_{D(OFF)}$		-	23	-	
Turn-Off Fall Time	t_f		-	23	-	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
Drain-Source diode forward voltage	V_{SD}	$V_{GS}=0V, I_S=500mA$	-	0.87	1.3	V

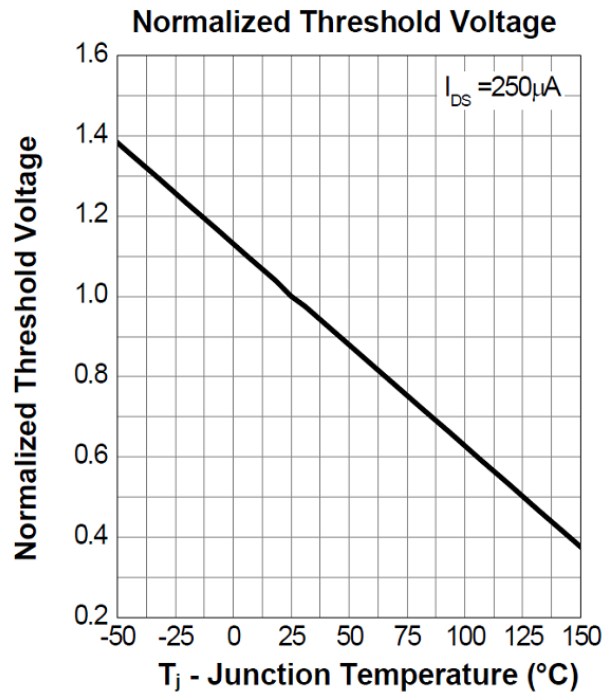
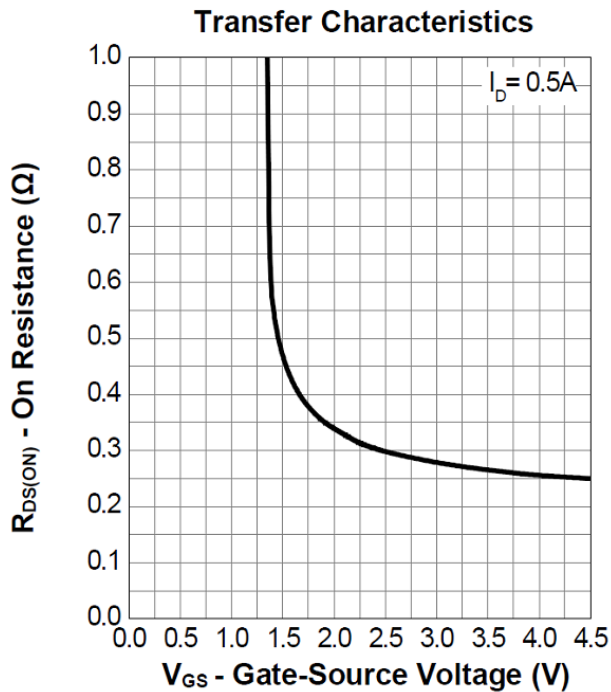
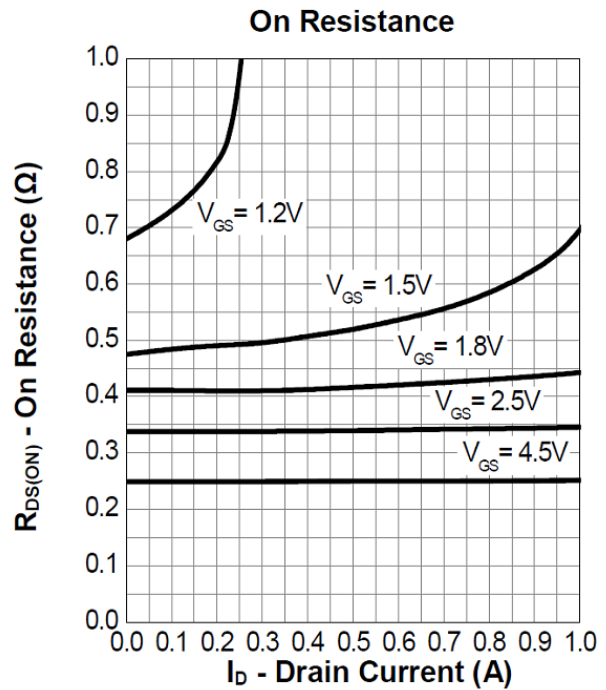
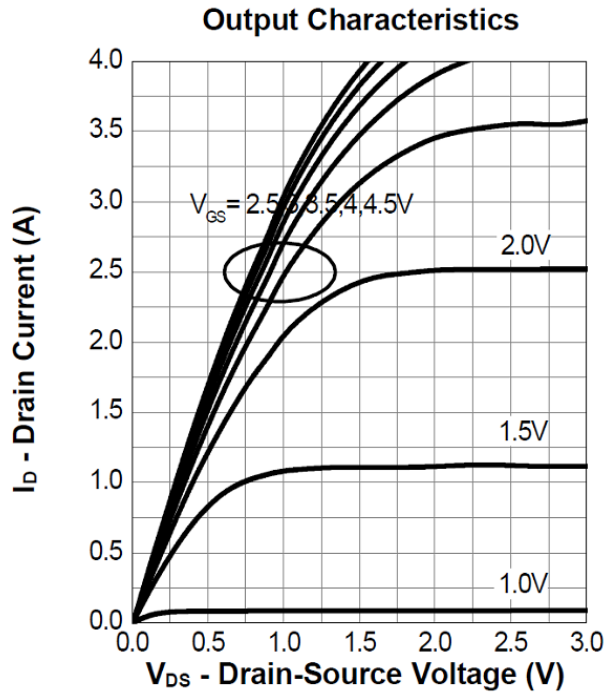
Notes:

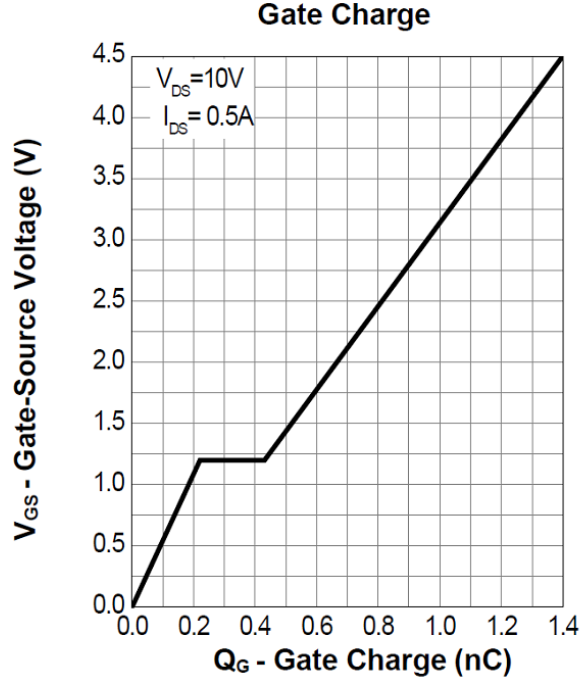
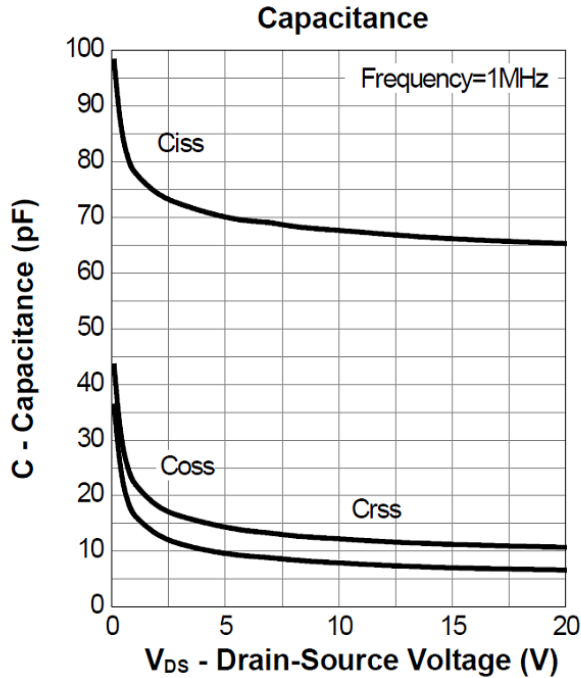
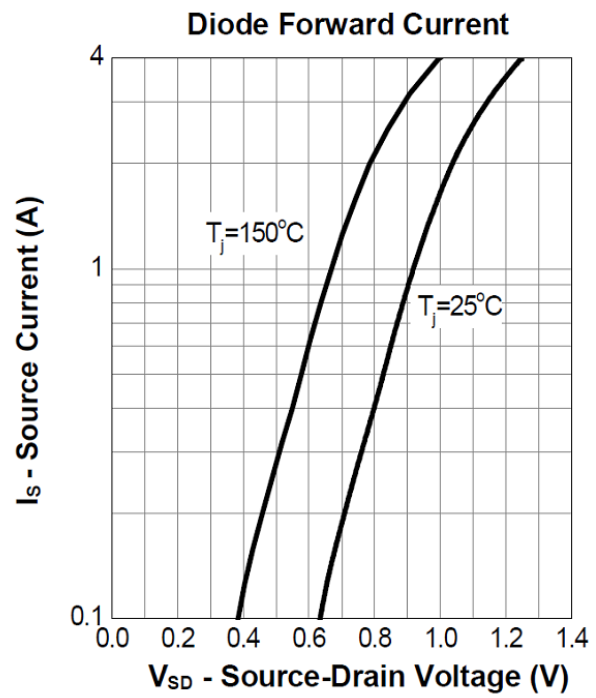
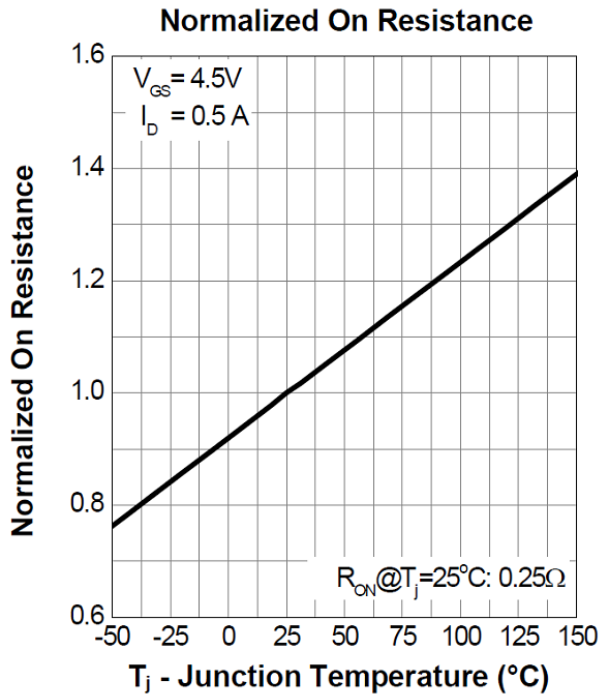
1. Pulse width limited by maximum junction temperature.

2. Pulse test: Pulse width $\leq 300 \mu s$, Duty cycle $\leq 2\%$



TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



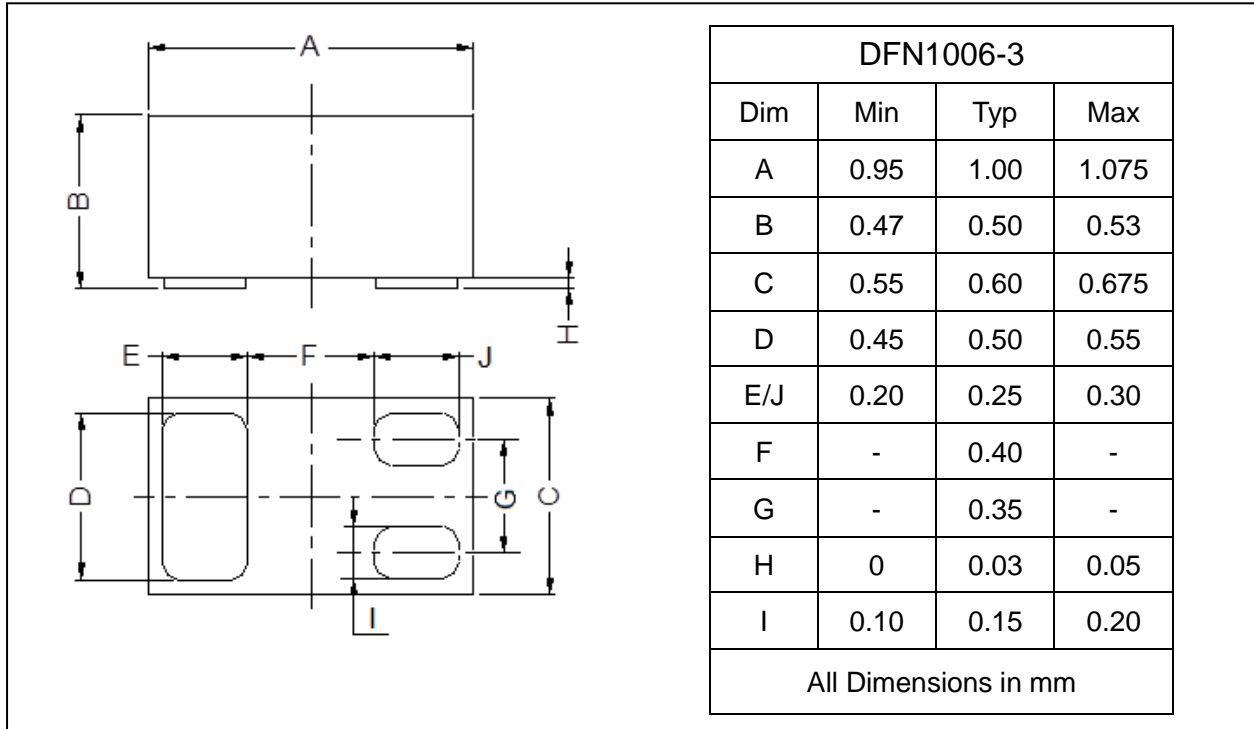




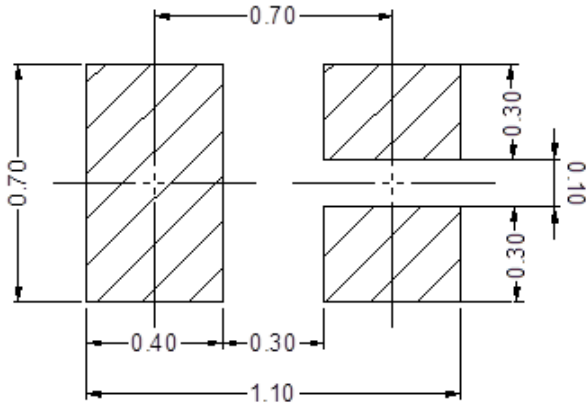
PACKAGE OUTLINE

Plastic surface mounted package

DFN1006-3



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
LGE2231L	DFN1006-3	10000 pcs / Tape & Reel