

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-20V	130mΩ@-4.5V	-1.0A
	180mΩ@-2.5V	

Feature

- Surface Mount Package
- P-Channel Switch with Low RDS(on)
- Operated at Low Logic Level Gate Drive

Applications

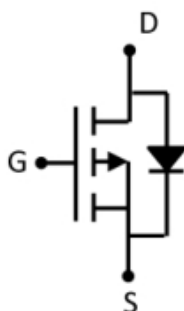
- Load Switch
- Portable Devices
- DCDC conversion

Package

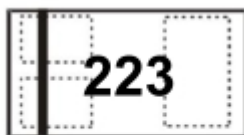


DFN1006-3L

Circuit diagram



Marking



223 =Device Code

Absolute maximum ratings

(T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-1	A
Pulsed Drain Current	I _{DM}	-2	A
Power Dissipation	P _D	0.15	W
Thermal Resistance from Junction to Ambient	R _{θJA}	833	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

Electrical characteristics

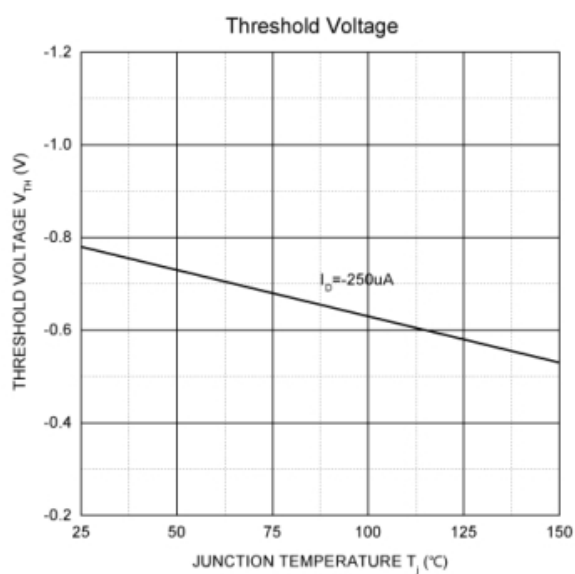
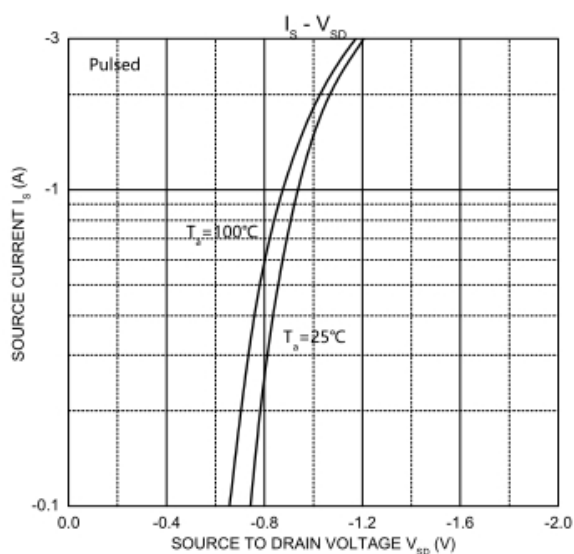
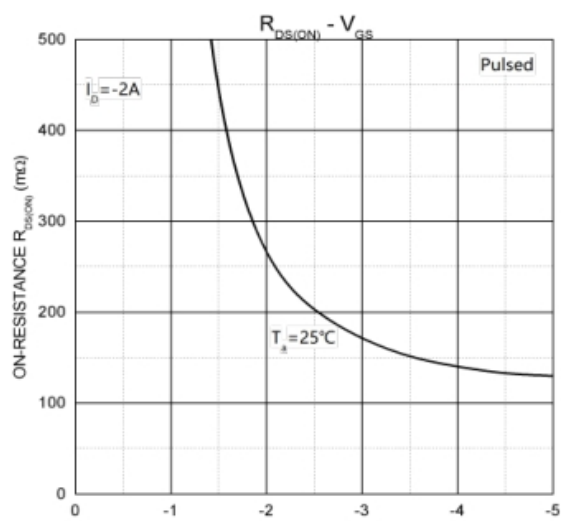
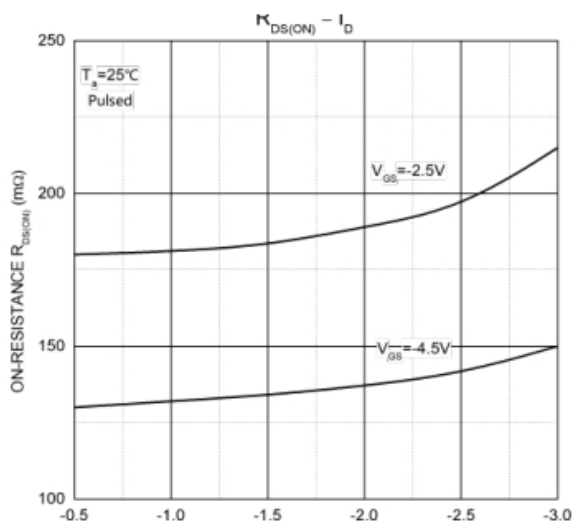
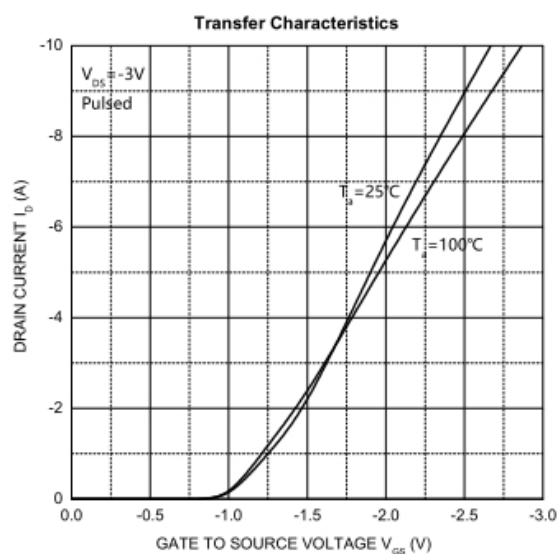
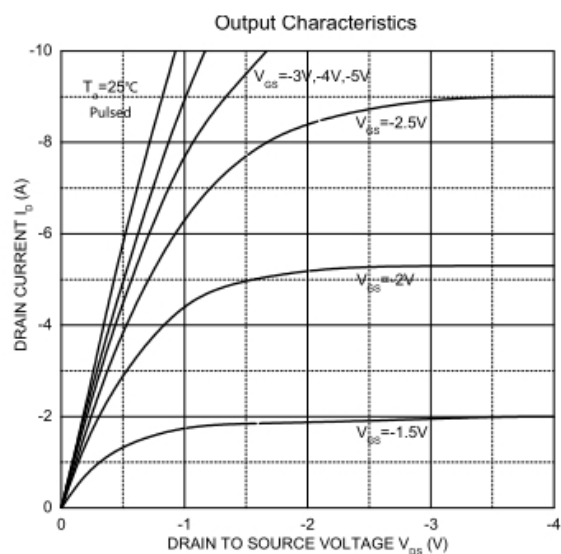
($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV (BR)DSS	V _{GS} = 0V, I _D = -250μA	-20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -20V, V _{GS} = 0V			-1	uA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V, V _{DS} = 0V			±100	uA
Gate threshold voltage ⁽¹⁾	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250μA	-0.4	-0.65	-1.0	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} = -4.5V, I _D = -1A		130	180	mΩ
		V _{GS} = -2.5V, I _D = -0.5A		180	270	
Dynamic Characteristics						
Input capacitance	C _{iss}	V _{DS} = -10V, V _{GS} =0V, f=1MHz		270		pF
Output capacitance	C _{oss}			55		
Reverse transfer capacitance	C _{rss}			30		
Total Gate Charge	Q _g	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -2A		2.7		nC
Gate-Source Charge	Q _{gs}			0.46		
Gate-Drain Charge	Q _{gd}			0.7		
Turn-on Delay Time	T _{d(on)}	V _{DD} = -10V, V _{GEN} =-4.5V, R _L =5Ω, R _{GEN} =3Ω		10		nS
Turn-on Rise Time	T _r			5		
Turn-Off Delay Time	T _{d(off)}			21		
Turn-Off Fall Time	t _f			7		
Source-Drain Diode Characteristics						
Diode Forward voltage	V _{DS}	I _S = -1A, V _{GS} = 0V			-1.2	V

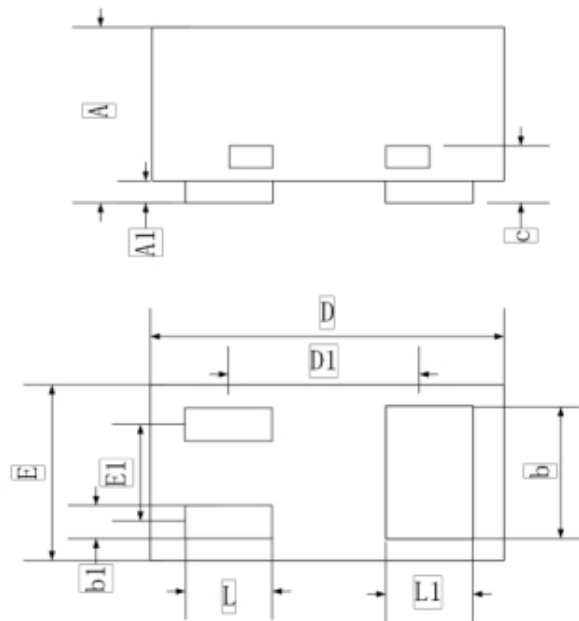
Notes:

1. Pulse Test: Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
2. Guaranteed by design, not subject to production testing.

Typical Characteristics



DFN1006-3L Package Information



Symbol	Dimensions in millimeters	
	Min.	Max.
A	0.46	0.51
A1	0	0.05
b	0.45	0.55
b1	0.1	0.2
c	0.08	0.18
D	0.95	1.05
D1	0.65	
E	0.55	0.65
E1	0.325	
L	0.2	0.3
L1	0.2	0.3

DFN1006-3L Tape

- DFN1006-3L Tape Leader and Trailer

