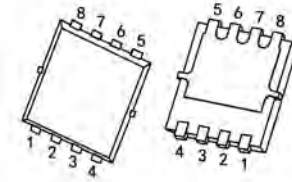


FEATURES

- $R_{DS(ON)} \leq 32m\Omega$ (24 m Ω Typ.)
@ $V_{GS}=10V$
- $R_{DS(ON)} \leq 36m\Omega$ (26m Ω Typ.)
@ $V_{GS}=4.5V$
- RoHS and Halogen-Free Compliant

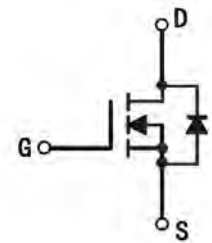
DFN 5*6-8



1: S 3: S 5: D 7: D
2: S 4: G 6: D 8: D

APPLICATIONS

- PWM Applications
- Load Switch
- Power Management



MARKING



YYMM:Date Code(year&month)

XX: Internal Code

MAXIMUM RATINGS (Tc=25°C unless otherwise noted)

Symbol	Parameter	Limit.	Units	
V_{DSS}	Drain-Source Voltage	100	V	
V_{GSS}	Gate-Source Voltage	± 20	V	
I_D	Continuous Drain Current @ $V_{GS}=10V$ <small>note1</small>	$T_C = 25^\circ C$	28	A
		$T_C = 100^\circ C$	18	A
I_{DM}	Pulsed Drain Current <small>note2</small>	112	A	
E_{AS}	Single Pulsed Avalanche Energy <small>note3</small>	52.6	mJ	
P_D	Power Dissipation	$T_C = 25^\circ C$	42	W
$R_{\theta JC}$	Thermal Resistance, Junction to Case	3	$^\circ C/W$	
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150	$^\circ C$	

MOSFET ELECTRICAL CHARACTERISTICS Tc=25 °C unless otherwise specified

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 250μA	100	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 100V, V _{GS} = 0V, T _J = 25°C	-	-	1	μA
I _{GSS}	Gate to Body Leakage Current	V _{GS} = ±20V, V _{DS} = 0V	-	-	±100	nA
On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = 250μA	1.0	1.5	2.5	V
R _{DS(on)}	Static Drain-Source On-Resistance ^{note4}	V _{GS} = 10V, I _D = 20A	-	24	32	mΩ
		V _{GS} = 4.5V, I _D = 10A	-	26	36	mΩ
Dynamic Characteristics ^{note5}						
C _{iss}	Input Capacitance	V _{DS} = 50V, V _{GS} = 0V f = 1.0MHz	-	3216	-	pF
C _{oss}	Output Capacitance		-	127	-	pF
C _{rss}	Reverse Transfer Capacitance		-	114	-	pF
Q _g	Total Gate Charge	V _{DS} = 50V, I _D = 20A V _{GS} = 10V	-	23.1	-	nC
Q _{gs}	Gate-Source Charge		-	5	-	nC
Q _{gd}	Gate-Drain("Miller") Charge		-	4.1	-	nC
Switching Characteristics ^{note5}						
t _{d(on)}	Turn-On Delay Time	V _{GS} = 10V, V _{DD} = 50V R _G = 1.8Ω, I _D = 20A	-	12.5	-	ns
t _r	Turn-On Rise Time		-	6	-	ns
t _{d(off)}	Turn-Off Delay Time		-	22.1	-	ns
t _f	Turn-Off Fall Time		-	5.4	-	ns
Drain-Source Diode Characteristics and Maximum Ratings						
V _{SD}	Drain to Source Diode Forward Voltage	V _{GS} = 0V, I _{SD} = 20A T _J = 25°C	-	-	1.2	V

Notes: 1. T_C = 25 °C Limited only by maximum temperature allowed. Calculated continuous current based on maximum allowable junction temperature.

2. PW ≤ 10μs, Duty cycle ≤ 1%

3. EAS condition: V_{DD} = 50V, V_G = 10V, R_G = 25Ω, I_{AS} = 14.5A, L = 0.5mH, starting T_J = 25°C.

4. Pulse Test: Pulse width ≤ 300μs, Duty Cycle ≤ 2%

5. Guaranteed by design, not subject to production testing

TYPICAL PERFORMANCE CHARACTERISTICS

Figure 1: Output Characteristics

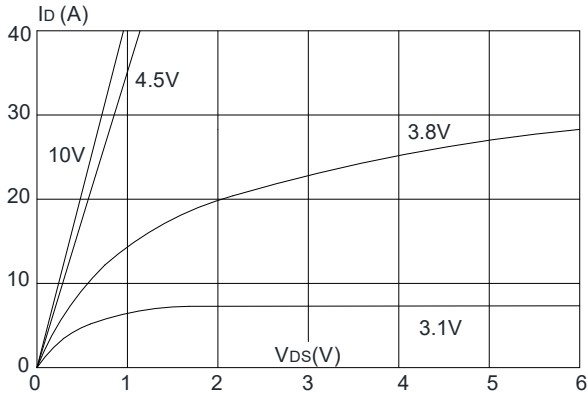


Figure 2: Typical Transfer Characteristics

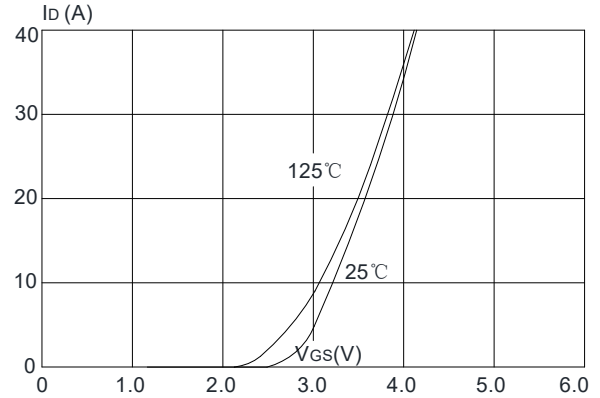


Figure 3: On-resistance vs. Drain Current

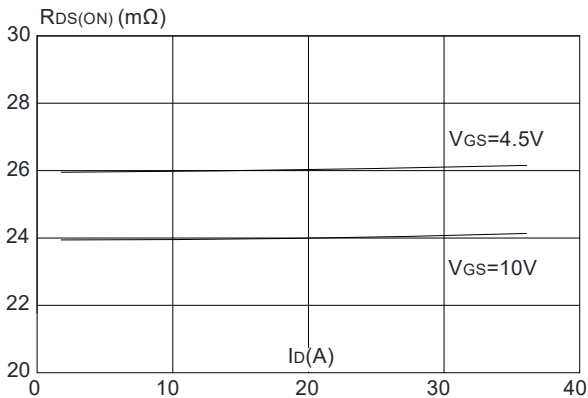


Figure 4: Body Diode Characteristics

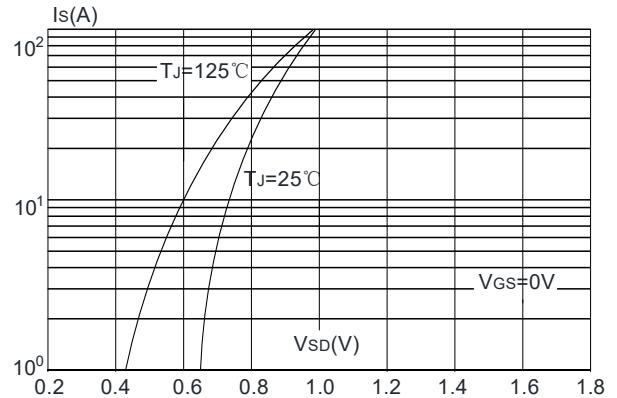


Figure 5: Gate Charge Characteristics

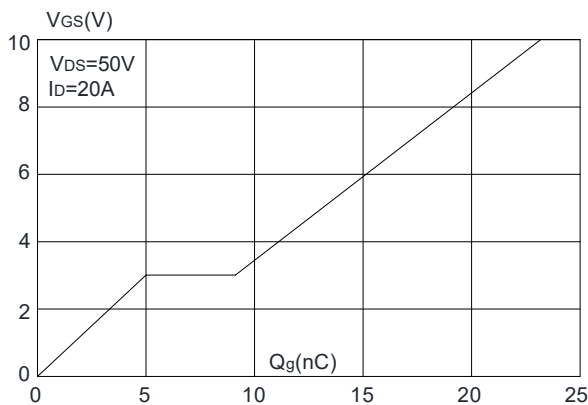
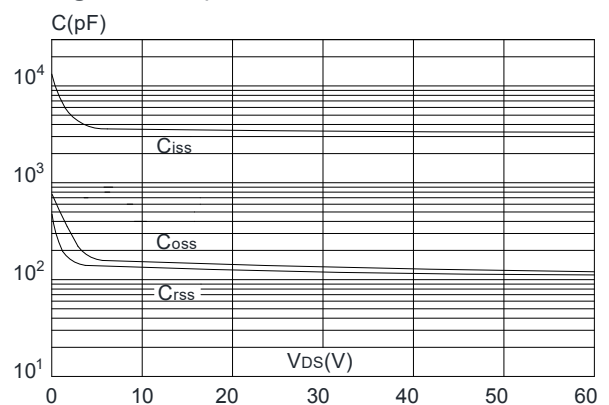
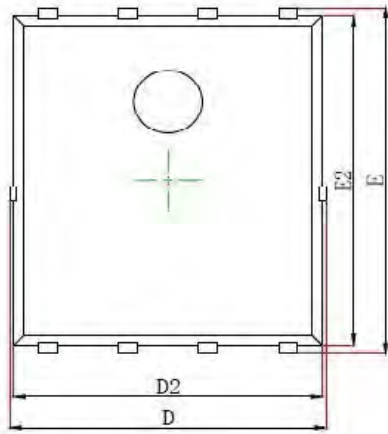


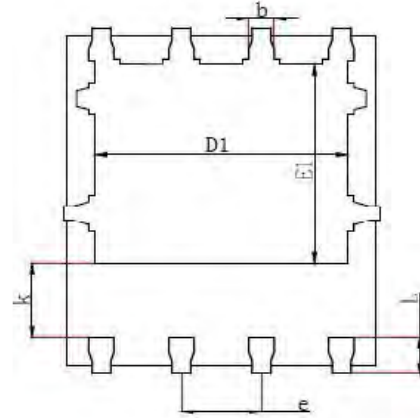
Figure 6: Capacitance Characteristics



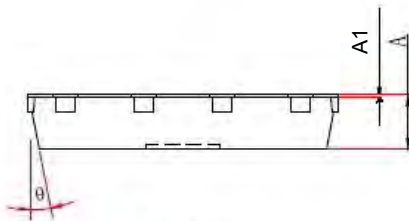
DFN5*6-8 PACKAGE OUTLINE DRAWING



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.100	0.031	0.043
A1	0.000	0.05	0.000	0.002
D	-	5.4	-	0.212
E	-	6.200	-	0.244
D1	3.900	4.200	0.153	0.165
E1	3.350	3.650	0.132	0.144
D2	4.800	5.100	0.189	0.201
E2	5.674	5.950	0.223	0.234
k	1.100	1.500	0.043	0.059
b	0.250	0.490	0.010	0.019
e	1.170	1.370		
L	0.510	0.711	0.020	0.028
θ	6°	14°	6°	14°