



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	8mΩ@-10V	-35A
	9.5mΩ@-6V	
	11mΩ@-4.5V	

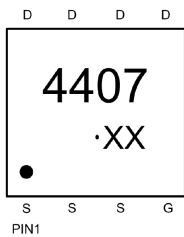
Feature

- High cell density trench P-ch MOSFETs
- Super low gate charge
- Excellent CdV/dt effect decline
- Advanced high cell density Trench technology

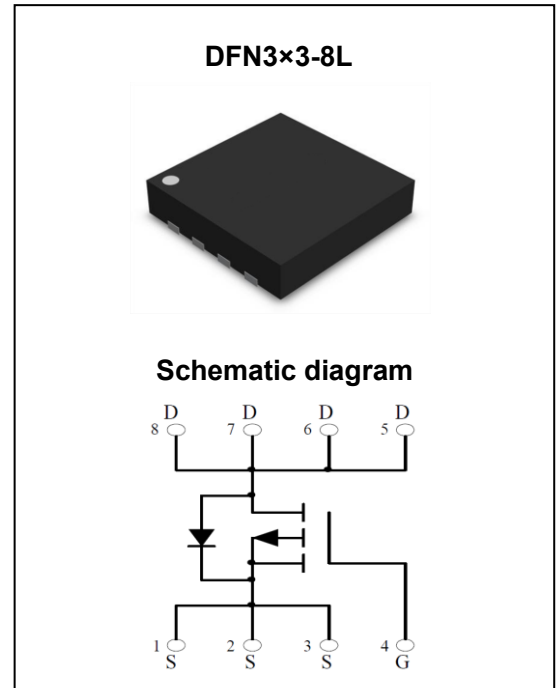
Application

- Battery protection applications
- Load switch

MARKING:



4407 = Device Code;
 XX = Date Code;
 Solid Dot = Green Molding Compound Device;
 Solid Dot = Pin1 Indicator;



ABSOLUTE MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-35	A
Pulsed Drain Current	I_{DM}	-100	A
Power Dissipation	P_D	2.5	W
Thermal Resistance from Junction to Ambient	$R_{θJA}$	50	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~ +150	°C

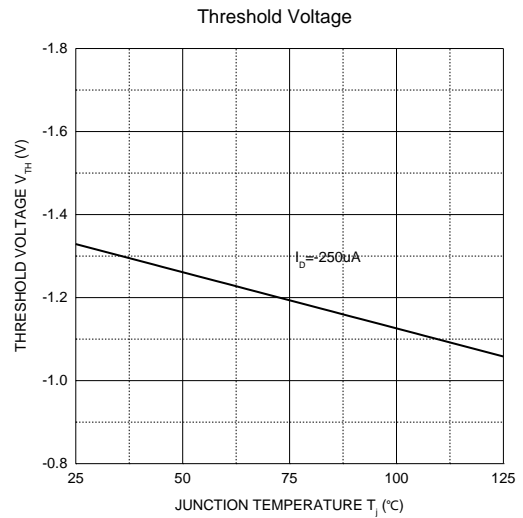
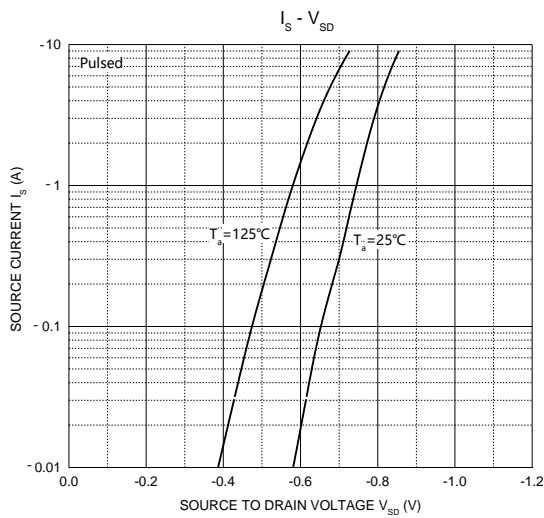
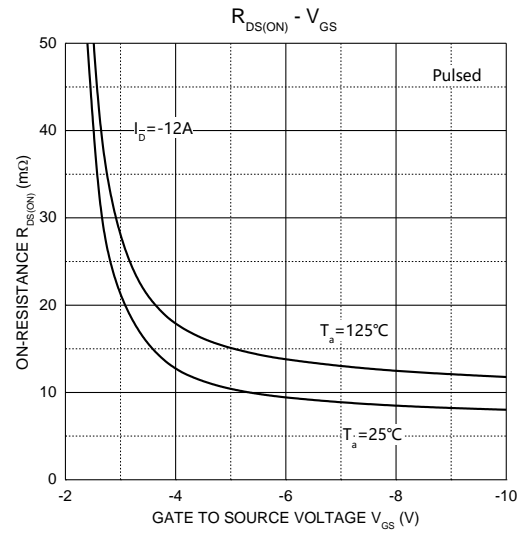
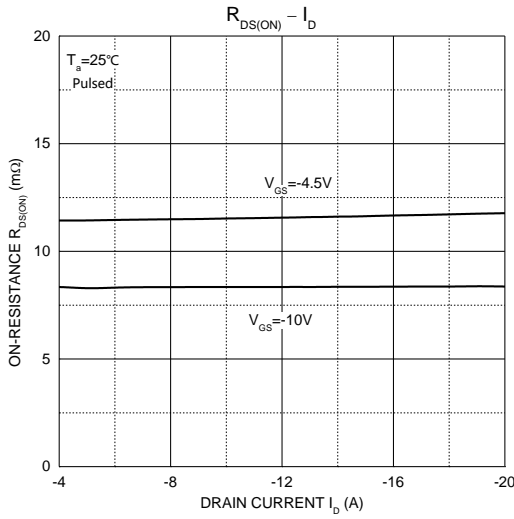
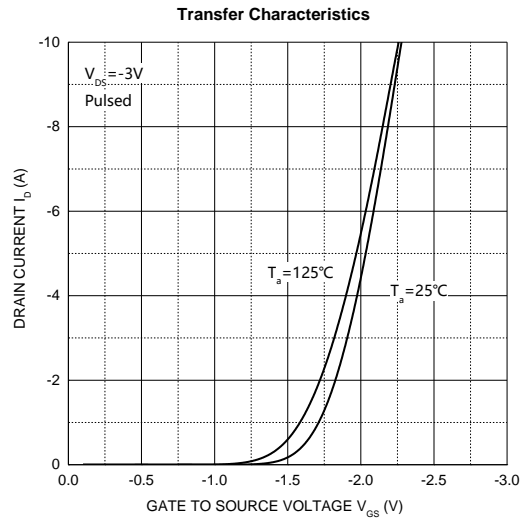
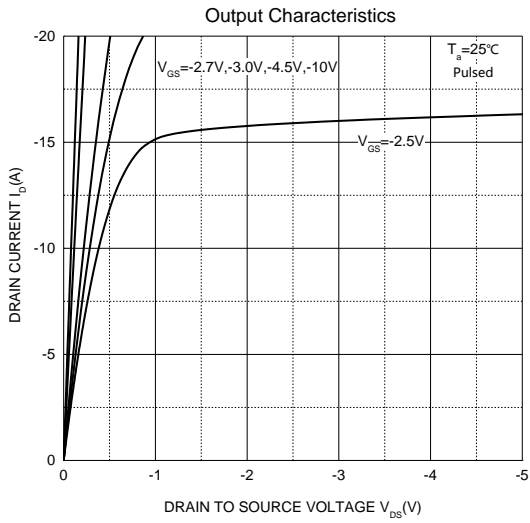
MOSFET ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted)

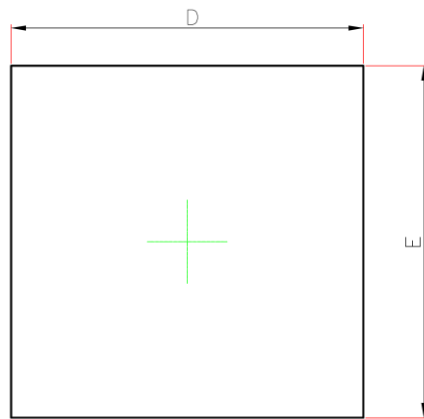
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage ¹	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.0	-1.5	-3.0	V
Drain-source on-resistance ¹	R _{DS(on)}	V _{GS} = -10V, I _D = -12A		8	13	mΩ
		V _{GS} = -6V, I _D = -10A		9.5	12	
		V _{GS} = -4.5V, I _D = -8A		11	22	
Forward tranconductance ¹	g _{FS}	V _{DS} = -5V, I _D = -15A		30		S
Dynamic characteristics²						
Input capacitance	C _{iss}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		3600		pF
Output capacitance	C _{oss}			420		
Reverse transfer capacitance	C _{rss}			400		
Switching Characteristics²						
Total gate charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -10A		62		nC
Gate-source charge	Q _{gs}			16		
Gate-drain charge	Q _{gd}			18		
Turn-on delay time	t _{d(on)}	V _{DD} = -15V, V _{GS} = -10V, R _G = 3Ω, R _L = 1.25Ω		20		ns
Turn-on rise time	t _r			14		
Turn-off delay time	t _{d(off)}			57		
Turn-off fall time	t _f			27		
Gate Resistance	R _g	f = 1MHz, V _{DS} = 0V, V _{GS} = 0V			10	Ω
Diode Characteristics						
Continuous Source Current	I _S	V _G = V _D = 0V, Force Current			-25	A
Pulsed Source Current	I _{SM}				-100	
Diode Forward Voltage ¹	V _{SD}	V _{GS} = 0V, I _S = -2A, T _J = 25°C		-0.73	-1.2	V

Notes:

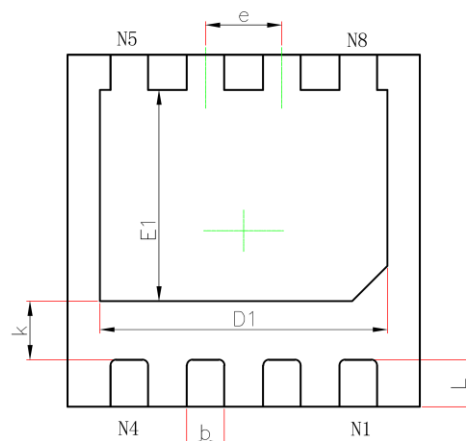
1. Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics

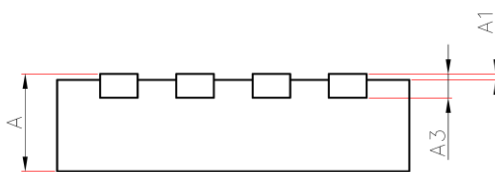


DFN3×3-8L Package Information


TOP VIEW



BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700/0.800	0.800/0.900	0.028/0.031	0.031/0.035
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	2.924	3.076	0.115	0.121
E	2.924	3.076	0.115	0.121
D1	2.350	2.550	0.093	0.100
E1	1.700	1.900	0.067	0.075
k	0.450	0.550	0.018	0.022
b	0.270	0.370	0.011	0.015
e	0.650TYP.		0.026TYP.	
L	0.324	0.476	0.013	0.019