

**Features**

- TrenchFET Power MOSFET
- Epoxy meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

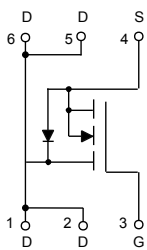
**Maximum Ratings**

- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 167°C/W Junction to Ambient<sup>(Note 2)</sup>

Parameter	Symbol	Rating	Unit
Drain -Source Voltage	V <sub>DS</sub>	12	V
Gate-Source Voltage	V <sub>GS</sub>	±8	V
Drain Current	I <sub>D</sub>	15	A
Drain Current-Pulse <sup>(Note 3)</sup>	I <sub>DM</sub>	75	A
Total Power Dissipation <sup>(Note 2)</sup>	P <sub>D</sub>	0.7	W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

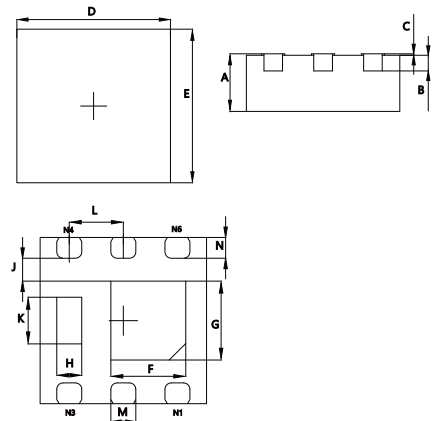
**Internal Structure**



Marking: N2014

**N-Channel MOSFET**

**DFN2020-6J**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.028	0.032	0.700	0.800	
B	0.008		0.203		TYP.
C	0.000	0.002	0.000	0.050	
D	0.076	0.082	1.924	2.076	
E	0.076	0.082	1.924	2.076	
F	0.031	0.039	0.800	1.000	
G	0.033	0.041	0.850	1.050	
H	0.008	0.016	0.200	0.400	
J	0.008	-----	0.200	-----	
K	0.018	0.026	0.460	0.660	
L	0.026		0.650		TYP.
M	0.010	0.014	0.250	0.350	
N	0.007	0.013	0.174	0.326	

## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	12			V
Gate-Threshold Voltage <sup>(Note 4)</sup>	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.50	0.7	1.1	V
Gate-Body Leakage Current	$I_{GSS}$	$V_{GS} = \pm 8V, V_{DS} = 0V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = 12V, V_{GS} = 0V$			1	$\mu A$
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=8V, I_D=5A$		5	8	m $\Omega$
		$V_{GS}=4.5V, I_D=5A$		7	9	
		$V_{GS}=2.5V, I_D=5A$		9	11	
Forward Transconductance <sup>(Note 4)</sup>	$g_{FS}$	$V_{DS}=6V, I_D=5A$		40		S
Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V, I_S=10A$			1.2	V
<b>Dynamic Characteristics<sup>(Note 5)</sup></b>						
Input Capacitance	$C_{iss}$	$V_{DS}=15V, V_{GS}=0V, f=1MHz$		1300		pF
Output Capacitance	$C_{oss}$			210		
Reverse Transfer Capacitance	$C_{rss}$			140		
Gate Resistance	$R_g$	$f=1MHz$		11		$\Omega$
<b>Switching Characteristics<sup>(Note 5)</sup></b>						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=15V, V_{GS}=10V, I_D=15A, R_G=3.3\Omega$		11		ns
Turn-On Rise Time	$t_r$			30		
Turn-Off Delay Time	$t_{d(off)}$			24		
Turn-Off Fall Time	$t_f$			6		
Total Gate Charge	$Q_g$	$V_{DS}=15V, V_{GS}=10V, I_D=30A$		23		nC
Gate-Source Charge	$Q_{gs}$			3.3		
Gate-Drain Charge	$Q_{gd}$			4.8		

Note:

- Surface Mounted On FR4 Board Using The Minimum Pad Size, 1oz Copper.
- Surface Mounted On FR4 Board Using 1 Square Inch Pad Size, 1oz Copper.
- Pulse Test: Pulse Width $\leq 300\mu s$ , Duty Cycle $\leq 2\%$ .
- These Parameters Have No Way To Verify.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [GOFORD](#) manufacturer:*

Other Similar products are found below :

[614233C](#) [648584F](#) [IRFD120](#) [IRFF430](#) [JANTX2N5237](#) [2N7000](#) [FCA20N60\\_F109](#) [FDZ595PZ](#) [AOD464](#) [2SK2267\(Q\)](#) [2SK2545\(Q,T\)](#)  
[405094E](#) [423220D](#) [MIC4420CM-TR](#) [VN1206L](#) [614234A](#) [715780A](#) [SSM6J414TU,LF\(T](#) [751625C](#) [BSC884N03MS G](#) [BSF024N03LT3 G](#)  
[PSMN4R2-30MLD](#) [TK31J60W5,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [FCAB21350L1](#) [P85W28HP2F-](#)  
[7071](#) [DMN1053UCP4-7](#) [NTE2384](#) [NTE2969](#) [NTE6400A](#) [DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#)  
[SSM6P54TU,LF](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#) [STF5N65M6](#) [STU5N65M6](#)  
[C3M0021120D](#) [DMN13M9UCA6-7](#) [BSS340NWH6327XTSA1](#) [MCM3400A-TP](#) [DMTH10H4M6SPS-13](#) [IRF40SC240ARMA1](#)  
[IPS60R1K0PFD7SAKMA1](#)