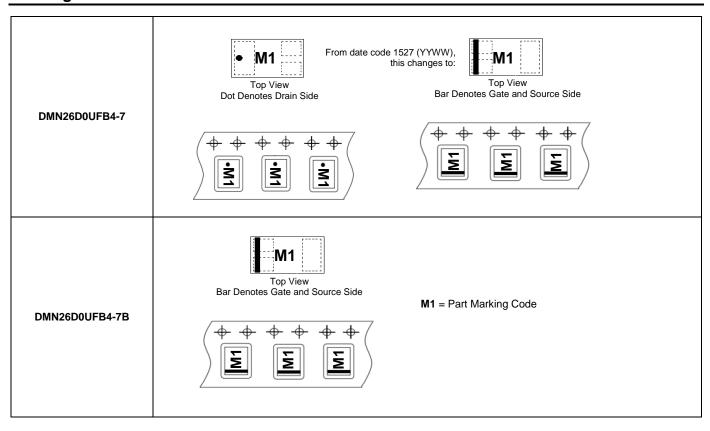


Marking Information



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic			Symbol	Value	Unit
Drain Source Voltage			V _{DSS}	20	V
Gate-Source Voltage			Vgss	±10	V
Continuous Drain Current (Note 5) V _{GS} = 4.5V	Steady State	$T_A = +25^{\circ}C$ $T_A = +70^{\circ}C$	l _D	240 190	mA
Continuous Drain Current (Note 5) V _{GS} = 1.8V	Steady State	$T_A = +25$ °C $T_A = +70$ °C	I _D	180 140	mA
Pulsed Drain Current - tp = 10µs			I _{DM}	805	mA

Thermal Characteristics (@TA = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Total Power Dissipation (Note 5) @T _A = +25°C	PD	350	mW
Thermal Resistance, Junction to Ambient (Note 5)	Reja	357	°C/W
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150	°C

Note: 5. Device mounted on FR-4 PC board, with minimum recommended pad layout, single sided.

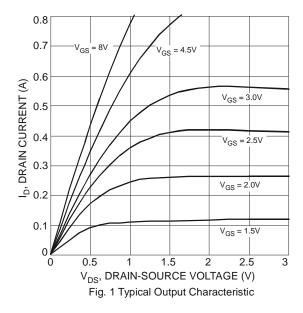


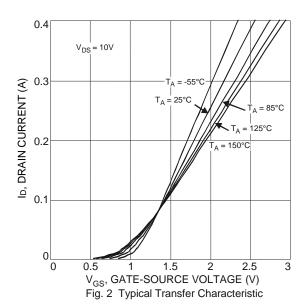
Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition	
OFF CHARACTERISTICS (Note 6)							
Drain-Source Breakdown Voltage	BV _{DSS}	20	_	_	V	$V_{GS} = 0V, I_{D} = 100\mu A$	
Zero Gate Voltage Drain Current @ T _C = +25°C	I _{DSS}	_	_	500	nA	$V_{DS} = 20V, V_{GS} = 0V$	
Gate-Body Leakage	Igss	_	_	±1 ±100	μA nA	$V_{GS} = \pm 10V$, $V_{DS} = 0V$ $V_{GS} = \pm 5V$, $V_{DS} = 0V$	
ON CHARACTERISTICS (Note 6)							
Gate Threshold Voltage	Vgs(TH)	0.6	_	0.9	V	$V_{DS} = V_{GS}$, $I_D = 250\mu A$	
Static Drain-Source On-Resistance	R _{DS(ON)}		1.8 2.5 3.4 4.7	3.0 4.0 6.0 10.0	Ω	$V_{GS} = 4.5V, I_{D} = 100mA$ $V_{GS} = 2.5V, I_{D} = 50mA$ $V_{GS} = 1.8V, I_{D} = 20mA$ $V_{GS} = 1.5V, I_{D} = 10mA$	
Forward Transconductance	Yfs	180	242	_	mS	$V_{DS} = 10V, I_{D} = 0.1A$	
Source-Drain Diode Forward Voltage	VsD	0.5	_	1.4	V	Vgs = 0V, Is = 115mA	
DYNAMIC CHARACTERISTICS (Note 7)							
Input Capacitance	Ciss	_	14.1	28.2	pF	V _{DS} = 15V, V _{GS} = 0V f = 1.0MHz	
Output Capacitance	Coss	_	2.9	5.8	pF		
Reverse Transfer Capacitance	Crss	_	1.6	3.2	pF		
SWITCHING CHARACTERISTICS (Note 7)							
Turn-On Delay Time	td(ON)	_	3.8				
Rise Time	t _R		7.9		ns	$V_{GS} = 4.5V, V_{DD} = 10V$	
Turn-Off Delay Time	tD(OFF)	_	13.4		115	$I_D = 200 mA$, $R_G = 2.0 \Omega$	
Fall Time	tF	_	15.2	_			

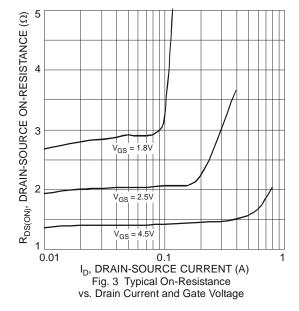
Notes:

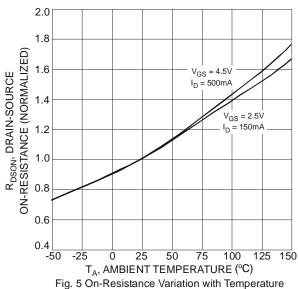
- 6. Short duration pulse test used to minimize self-heating effect.
- 7. Guaranteed by design. Not subject to product testing.











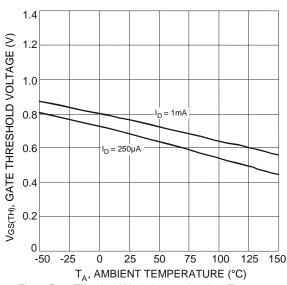


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

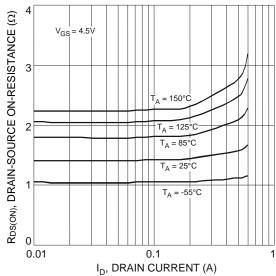


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

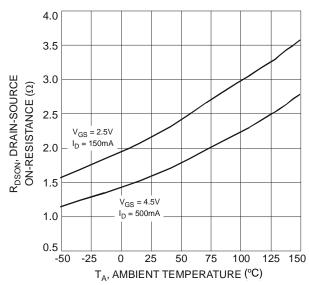


Fig. 6 On-Resistance Variation with Temperature

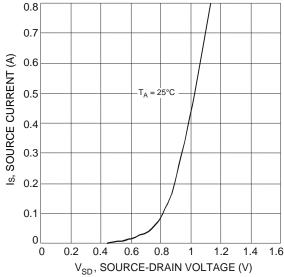
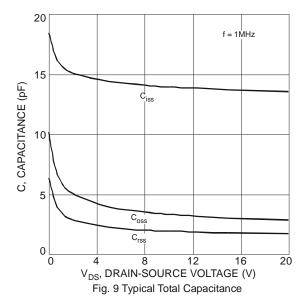


Fig. 8 Diode Forward Voltage vs. Current





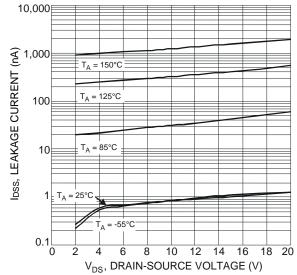


Fig. 10 Typical Leakage Current vs. Drain-Source Voltage

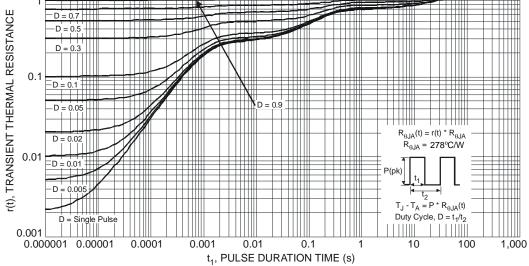


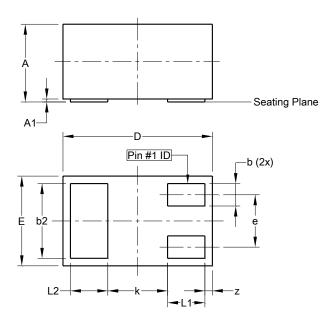
Fig. 11 Transient Thermal Response



Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

X2-DFN1006-3

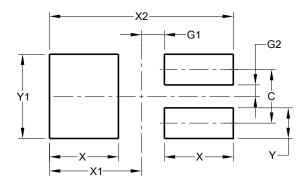


X2-DFN1006-3					
Dim	Min	Max	Тур		
Α		0.40	_		
A1	0.00	0.05	0.03		
b	0.10	0.20	0.15		
b2	0.45	0.55	0.50		
D	0.95	1.05	1.00		
Е	0.55	0.65	0.60		
е	_	_	0.35		
L1	0.20	0.30	0.25		
L2	0.20	0.30	0.25		
k			0.40		
Z	0.02	0.08	0.05		
All Dimensions in mm					

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

X2-DFN1006-3



Dimensions	Value (in mm)
С	0.350
G1	0.150
G2	0.075
Х	0.450
X1	0.600
X2	1.200
Y	0.200
Y1	0.550



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