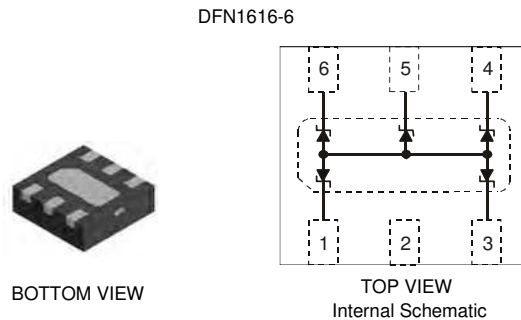


Features

- 5-line ESD Protection
- Sub-miniature Package (1.6 x 1.6mm)
- Low Capacitance – 42pF typ @ $V_R = 0V$
- Provides a High Level of Protection from ESD to IEC61000-4-2
 - $\pm 30kV$ Contact Discharge
 - $\pm 30kV$ Air Discharge
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: DFN1616-6
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (NiPdAu Finish over Copper leadframe).
- Polarity: Pin 1 Dot and Center Pad Notch, See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)



Maximum Ratings @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Current, 8/20 μs waveform, single shot, per IEC61000-4-5	I_{PPM}	5	A
Peak Pulse Power, 8/20 μs waveform, single shot, per IEC61000-4-5	P_{PP}	70	W
ESD Rating	Human Body Model	8	kV
	Machine Model	400	V
	IEC61000-4-2 Air Discharge	30	kV
	IEC61000-4-2 Contact Discharge	30	kV

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Thermal Resistance Junction to Ambient Air (Note 3)	$R_{\theta JA}$	256	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Reverse Standoff Voltage V_{RWM} @ $I_{RWM} = 1\mu A$	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Reverse Leakage @ V_{RWM} (Note 4)	Max. Clamping Voltage @ $I_{PP} = 1A$ per IEC61000-4-5	Max. Clamping Voltage V_C @ $I_{PP} = 5A$ per IEC61000-4-5	Max. Forward Clamping Voltage V_F @ $I_F = 1A$ per IEC61000-4-5	Max. Forward Clamping Voltage V_F @ $I_F = 5A$ per IEC61000-4-5	Max Total Capacitance $V_R = 0V$ $f = 1MHz$	Typical Total Capacitance $V_R = 2.5V$ $f = 1MHz$
Min (V)	Min (V)	Max (V)	I_T (mA)	I_R (μA)	V_C (V)	V_C (V)	V_F (V)	V_F (V)	C_T (pF)	C_T (pF)
5.0	6	8	1.0	0.1	9.5	12.5	2	4	50	25

- Notes:
1. No Purposefully added Lead.
 2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 3. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>. Only one switching diode powered on.
 4. Short duration pulse test used to minimize self-heating effect.

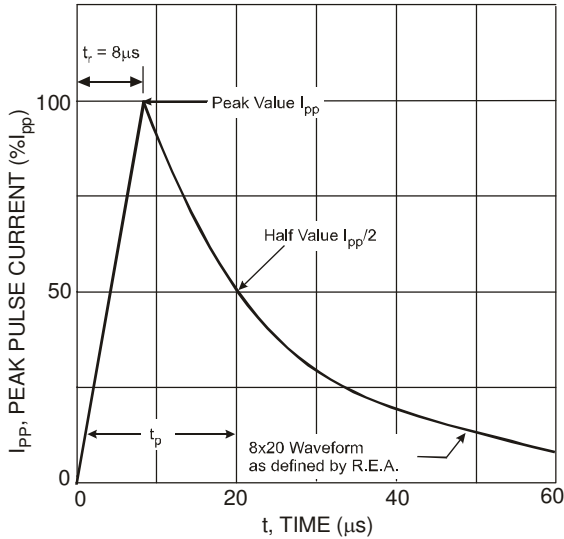


Fig. 1 Pulse Waveform

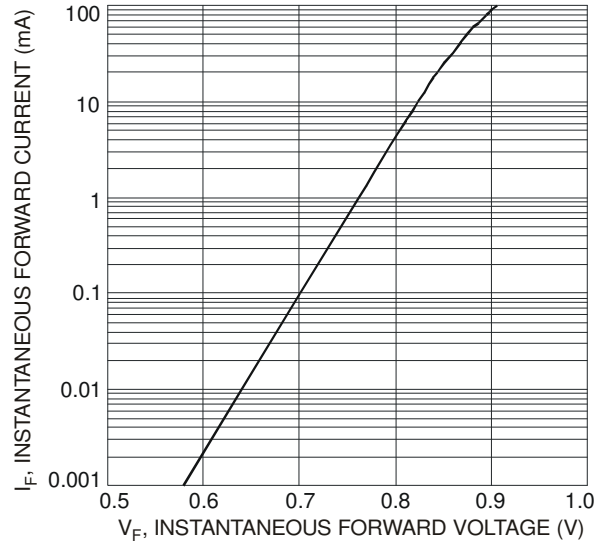


Fig. 2 Typical Forward Characteristics

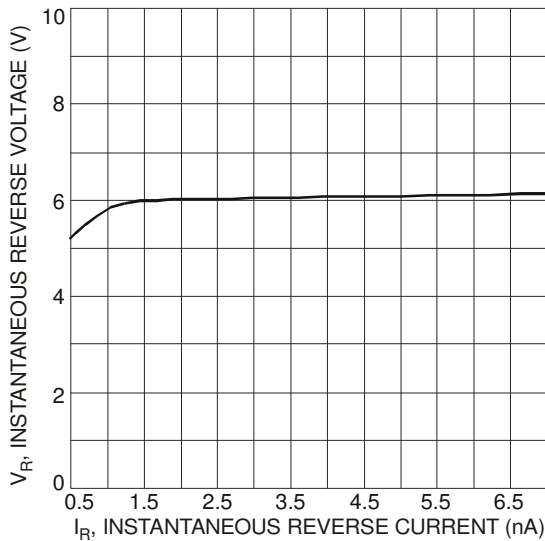


Fig. 3 Typical Reverse Characteristics

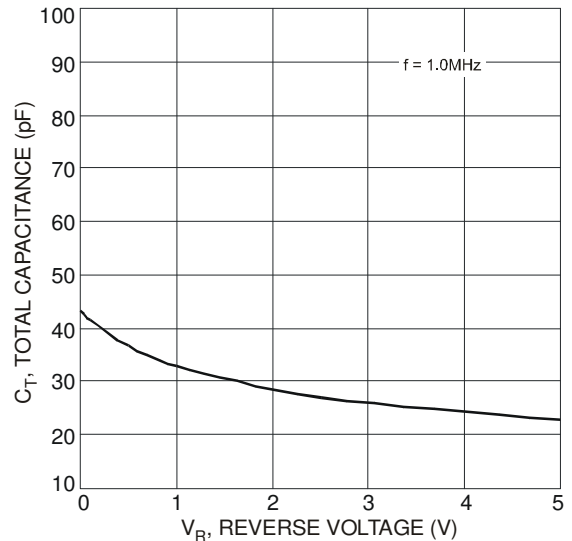


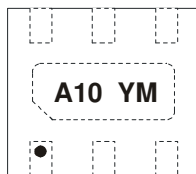
Fig. 4 Typical Capacitance vs. Reverse Voltage

Ordering Information (Note 5)

Part Number	Case	Packaging
DMF05LCFLP-7	DFN1616-6	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



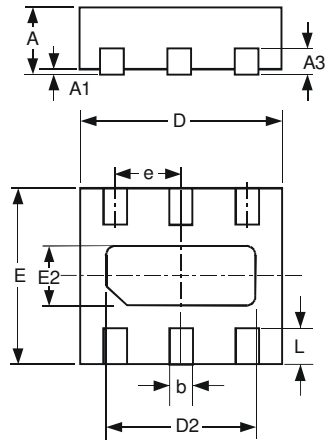
A10 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: X = 2010)
 M = Month (ex: 9 = September)

Date Code Key

Year	2010	2011	2012	2013	2014	2015
Code	X	Y	Z	A	B	C

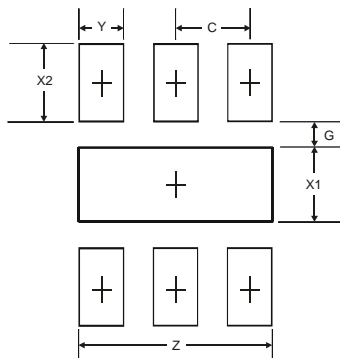
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



DFN1616-6			
Dim	Min	Max	Typ
A	0.545	0.605	0.575
A1	0	0.05	0.02
A3	—	—	0.13
b	0.20	0.30	0.25
D	1.55	1.675	1.60
D2	1.10	1.30	1.20
E	1.55	1.675	1.60
e	—	—	0.50
E2	0.30	0.50	0.40
L	0.275	0.375	0.325
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	1.3
G	0.175
X1	0.50
X2	0.525
Y	0.30
C	0.50

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

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