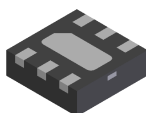


Features

- Low Forward Voltage Drop
- Fast Switching
- Very High Density (Five Diode Elements in a Sub-Miniature Package)
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

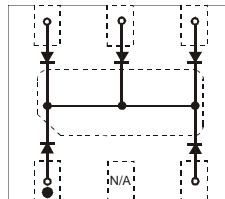
DFN1616-6



BOTTOM VIEW

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-020D
- 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)


TOP VIEW
Internal Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage	V _{RRM}	75	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current	I _{FM}	300	mA
Average Rectified Output Current	I _O	200	mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}	2.0	A
		1.0	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 3)	P _D	500	mW
Thermal Resistance Junction to Ambient Air (Note 3)	R _{θJA}	256	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 4)	V _{(BR)R}	75	—	V	I _R = 100μA
Forward Voltage	V _F	—	0.715	V	I _F = 1.0mA
			0.855		I _F = 10mA
			1.0		I _F = 50mA
			1.25		I _F = 150mA
Leakage Current (Note 4)	I _R	—	1.0	μA	V _R = 75V
			50	μA	V _R = 75V, T _J = 150°C
			30	μA	V _R = 25V, T _J = 150°C
			25	nA	V _R = 20V
Total Capacitance	C _T	—	2.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	4.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

- 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.

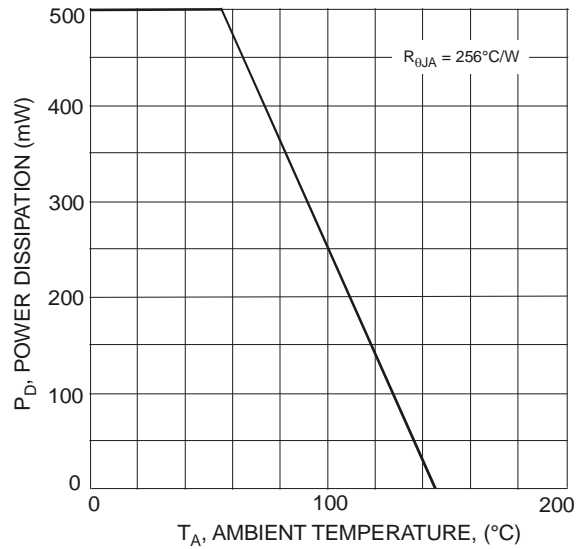


Fig. 1 Power Derating Curve

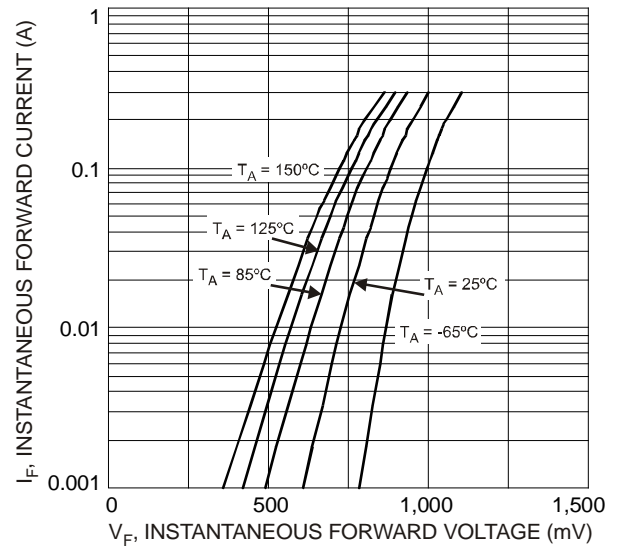


Fig. 2 Typical Forward Characteristics

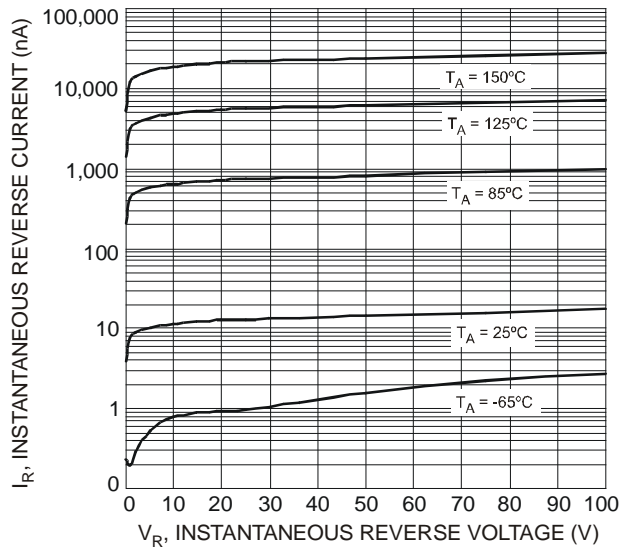


Fig. 3 Typical Reverse Characteristics

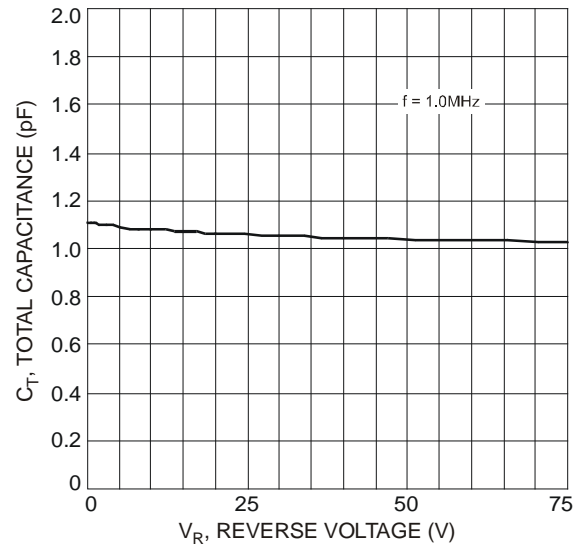


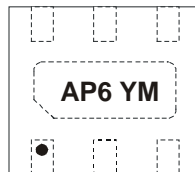
Fig. 4 Typical Capacitance vs. Reverse Voltage

Ordering Information (Note 5)

Part Number	Case	Packaging
MMBD4148PLM-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



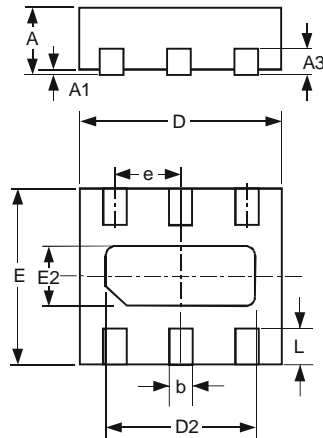
AP6 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: V = 2008
 M = Month ex: 9 = September

Date Code Key

Year	2008	2009	2010	2011	2012	2013	2014	2015
Code	V	W	X	Y	Z	A	B	C

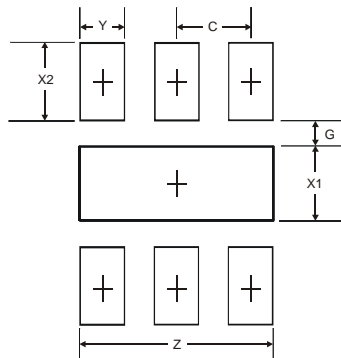
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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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