FIVE ELEMENT COMMON ANODE ESD-PROTECTION DIODE ARRAY

NEW PRODUCT

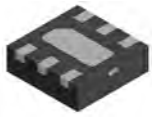
Features

- 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
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- **Lead Free/RoHS Compliant (Note 1)**
- **"Green" Device (Note 2)**
- **Qualified to AEC-Q101 Standards for High Reliability**

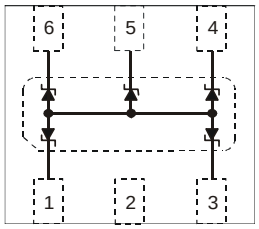
Mechanical Data

- 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)

DFN1616-6



BOTTOM VIEW



TOP VIEW
Internal Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Peak Pulse Current, 8/20μs waveform, single shot, per IEC61000-4-5		I_{PPM}	5	A
Peak Pulse Power, 8/20μs waveform, single shot, per IEC61000-4-5		P_{PP}	70	W
ESD Rating	Human Body Model	ESD	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	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Reverse Standoff Voltage V_{RWM} @ I_{RWM} = 1μA	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.

NEW PRODUCT

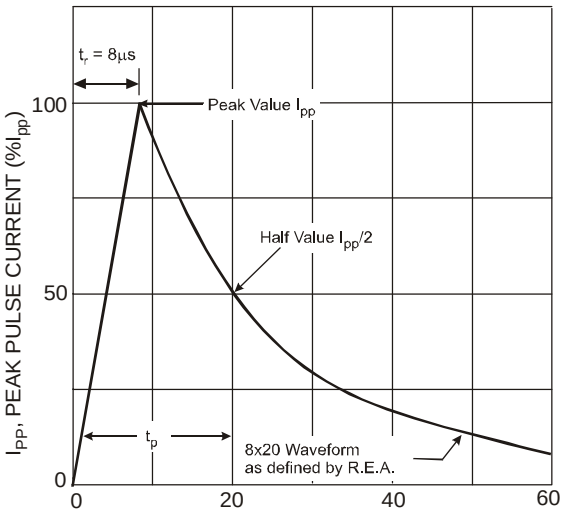


Fig. 1 Pulse Waveform

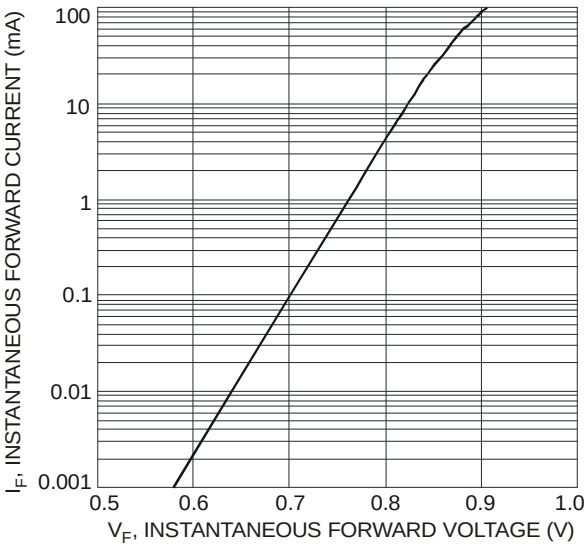


Fig. 2 Typical Forward Characteristics

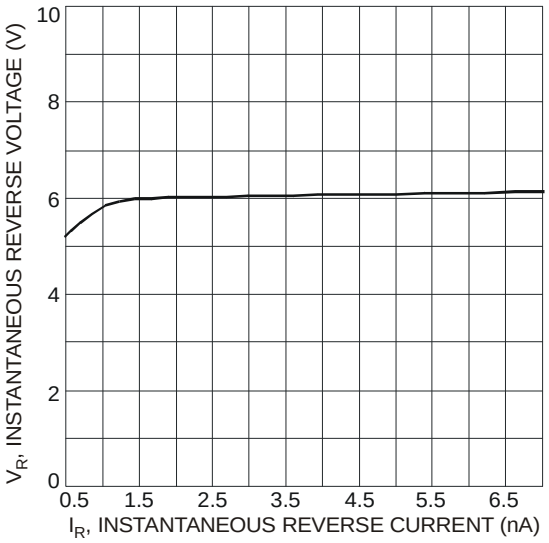


Fig. 3 Typical Reverse Characteristics

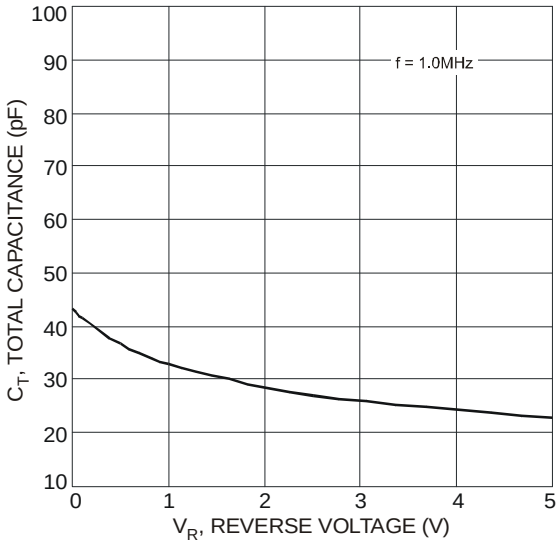


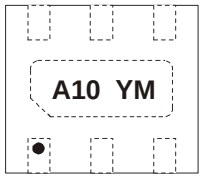
Fig. 4 Typical Capacitance vs. Reverse Voltage

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)

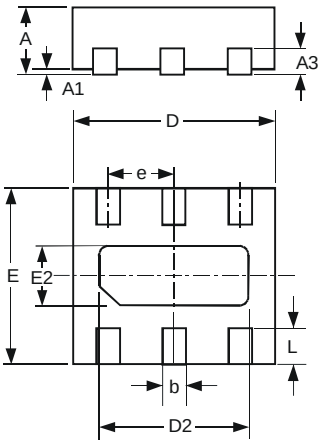
Date Code Key

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

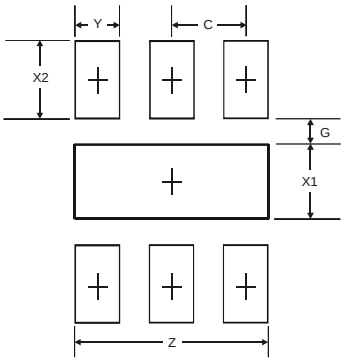
NEW PRODUCT

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

NEW PRODUCT

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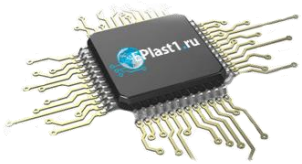
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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