

**SIX ELEMENT COMMON - CATHODE SCHOTTKY ARRAY**

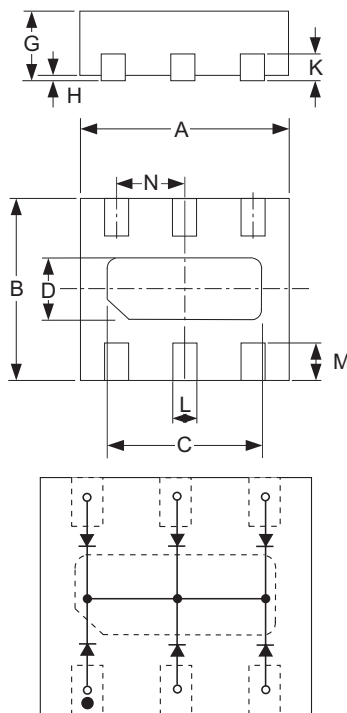
**NEW PRODUCT**

**Features**

- Low Forward Voltage Drop
- Fast Switching
- Very High Density (Six diode Elements in a sub-miniature Package)
- **Lead Free/RoHS Compliant (Note 2)**
- **"Green" Device (Note 3)**

**Mechanical Data**

- Case: DFN1616-6
- Case material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (NiPdAu Finish annealed over Copper leadframe).
- Polarity: Pin 1 Dot and Center Pad notch, See diagram
- Marking Code: ST (See Page 2)
- Weight: 0.004 grams (approximate)



DFN1616-6			
Dim	Min	Max	Typ
A	1.55	1.675	1.60
B	1.55	1.675	1.60
C	1.10	1.30	1.20
D	0.30	0.50	0.40
G	0.545	0.605	0.575
H	0	0.05	0.02
K	—	—	0.13
L	0.20	0.30	0.25
M	0.275	0.375	0.325
N	—	—	0.50

**All Dimensions in mm**

TOP VIEW SCHEMATIC

**Maximum Ratings** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
Forward Continuous Current	I <sub>FM</sub>	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	I <sub>FSM</sub>	625	mA
Power Dissipation (total package)	P <sub>d</sub>	250	mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	400	°C/W
Operating Temperature Range	T <sub>j</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +125	°C

**Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

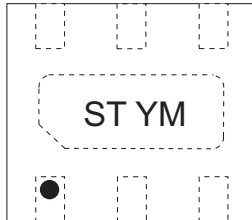
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	30	—	—	V	I <sub>R</sub> = 100µA
Forward Voltage	V <sub>F</sub>	—	260 — — 525	300 360 460 570	mV	I <sub>F</sub> = 0.1mA I <sub>F</sub> = 1.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 30mA
Reverse Current (Note 1)	I <sub>R</sub>	—	25 30 35 100	125 150 500 700	nA nA nA nA	V <sub>R</sub> = 1V V <sub>R</sub> = 2V V <sub>R</sub> = 5V V <sub>R</sub> = 30V
Reverse Recovery Time	t <sub>rr</sub>	—	—	5.0	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

- Notes:
1. Short duration test pulse used to minimize self-heating effect.
  2. No purposefully added lead.
  3. Diodes Inc.'s "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).

**Ordering Information**

Device	Packaging	Shipping
SDM6CC-7	DFN1616-6	3000/Tape & Reel

**Marking Information**

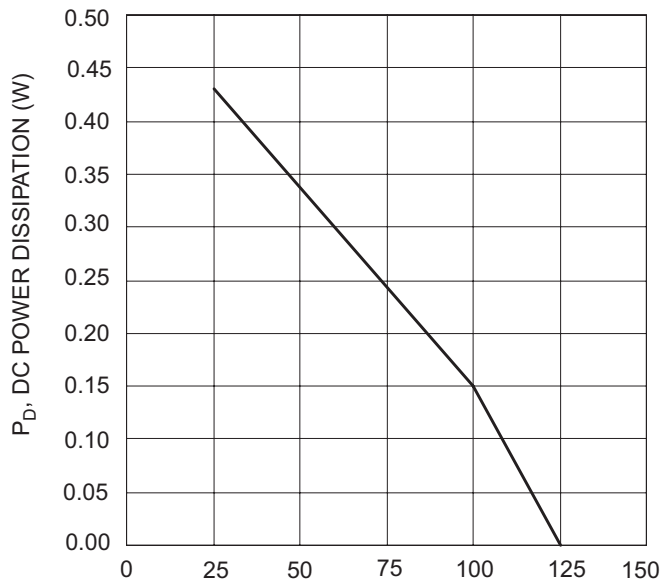


ST = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year ex: T = 2006  
 M = Month ex: 9 = September

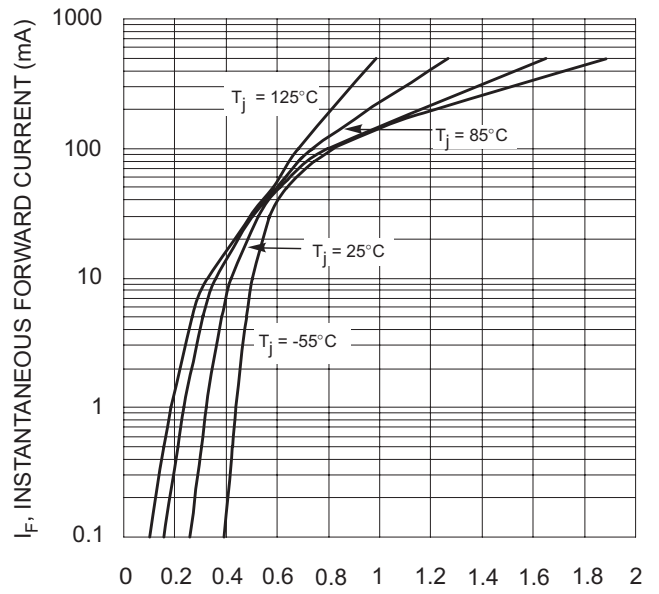
Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012
Code	T	U	V	W	X	Y	Z

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



$T_A$ , AMBIENT TEMPERATURE (°C)  
 Fig. 1, Power Dissipation Derating



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
 Fig. 2, Typical Forward Characteristics

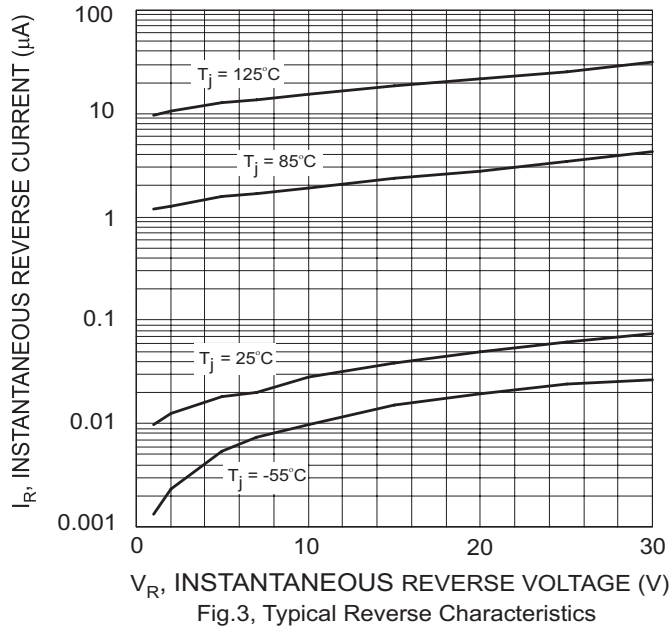


Fig.3, Typical Reverse Characteristics

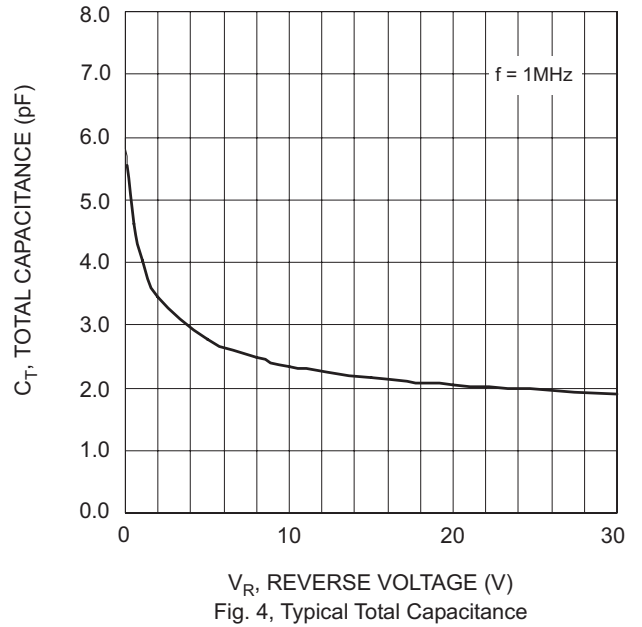
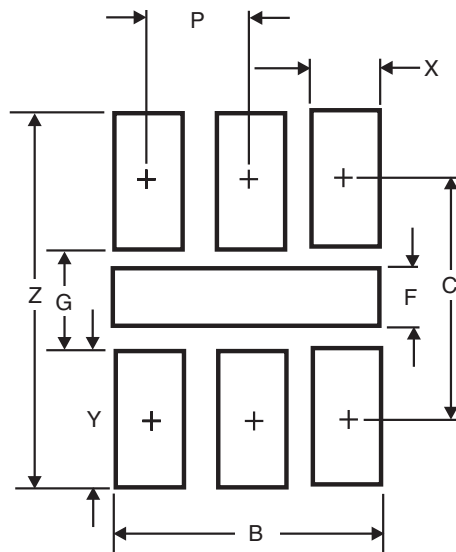


Fig. 4, Typical Total Capacitance

**Suggested Pad Layout**



Dimensions		
Dim	Inches	Millimeters
B	.051	1.30
C	.060	1.52
P	.020	0.50
F	.018	0.45
G	.035	0.89
X	.012	0.30
Y	.025	0.63
Z	.085	2.15

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