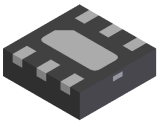
SIX ELEMENT COMMON - CATHODE SCHOTTKY ARRAY

Features

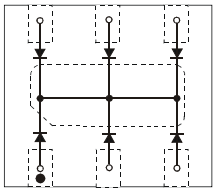
- Low Forward Voltage Drop
- Fast Switching
- Very High Density (Six diode Elements in a sub-miniature Package)
- **Lead Free/RoHS Compliant (Note 2)**
- **"Green" Device (Note 3)**

Mechanical Data

- Case: DFN1616-6
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- 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 Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)



Top View



Device Schematic

Maximum Ratings @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
Forward Continuous Current	I_{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	I_{FSM}	625	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (total package)	P_D	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	400	°C/W
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-65 to +125	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	30	—	—	V	I_R = 100μA
Forward Voltage	V_F	—	260 — — 525	300 360 460 570	mV	I_F = 0.1mA I_F = 1.0mA I_F = 10mA I_F = 30mA
Reverse Current (Note 1)	I_R	— — — —	25 30 35 100	125 150 500 700	nA nA nA nA	V_R = 1V V_R = 2V V_R = 5V V_R = 30V
Reverse Recovery Time	t_{rr}	—	—	5.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes:
1. Short duration pulse test 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.

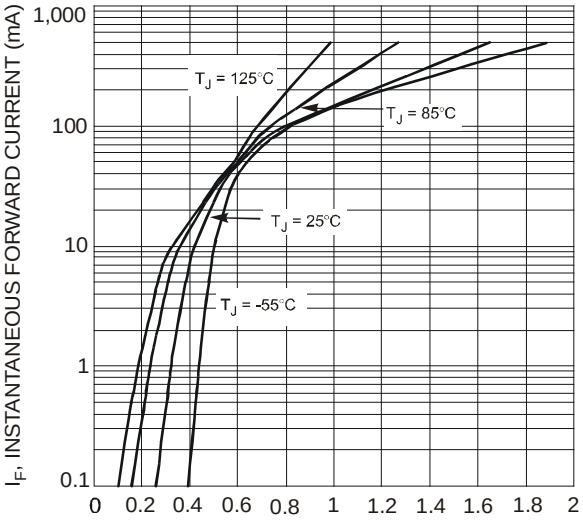


Fig. 1 Typical Forward Characteristics

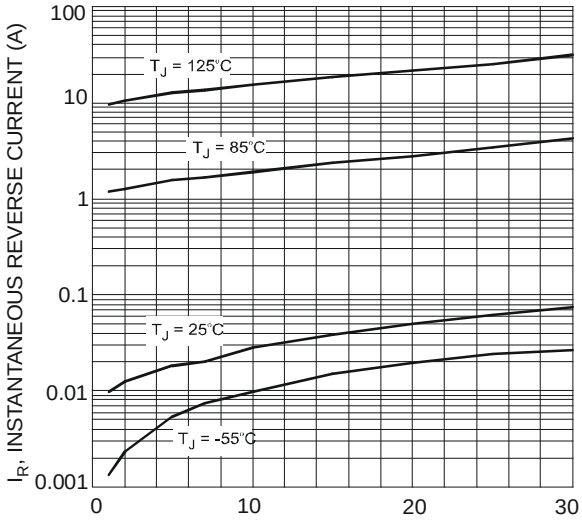


Fig. 2 Typical Reverse Characteristics

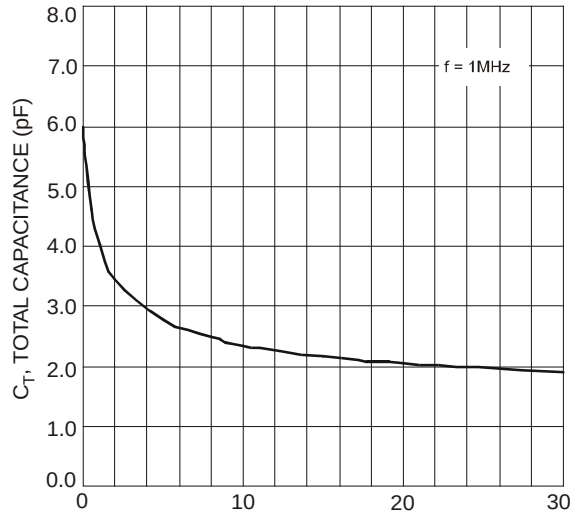


Fig. 3 Total Capacitance vs. Reverse Voltage

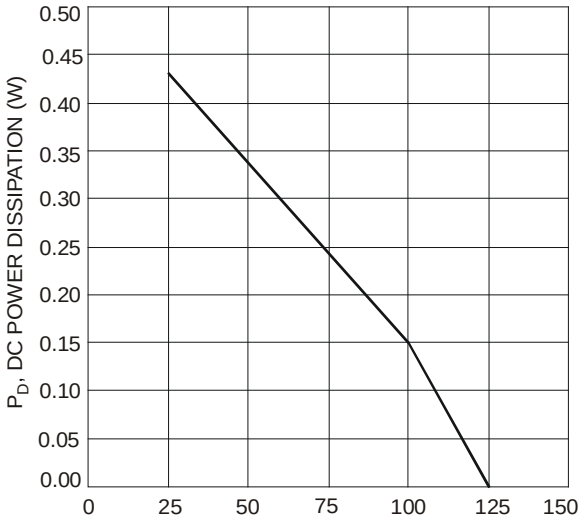


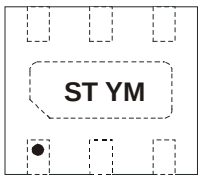
Fig. 4 Power Dissipation Derating

Ordering Information (Note 4)

Part Number	Case	Packaging
SDM6CC-7	DFN1616-6	3000/Tape & Reel

Notes: 4. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



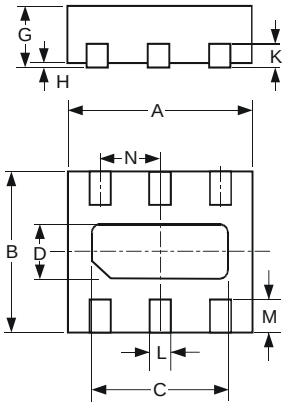
ST = Product Type Marking Code
YM = Date Code Marking
Y = Year ex: T = 2006
M = Month ex: 9 = September

Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	T	U	V	W	X	Y	Z	A	B	C

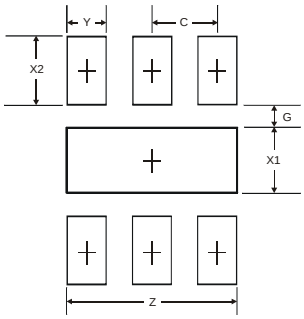
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



DFN1616-6			
Dim	**Min**	**Max**	**Typ**
A	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			

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