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MSD6100

Dual Switching Diode Common Cathode

ON Semiconductor®

http://onsemi.com

Features

- Pb−Free Packages are Available*

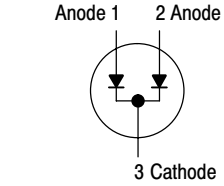
MAXIMUM RATINGS (EACH DIODE)

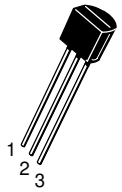
Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Recurrent Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current (Pulse Width = 10 μsec)	$I_{FM(surge)}$	500	mAdc
Total Device Dissipation @ T_A = 25°C (Note 1) Derate above = 25°C	P_D	625 5.0	mW mW/°C
Operating and Storage Junction Temperature Range (Note 1)	T_J, T_{stg}	−55 to +135	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

1. Continuous package improvements have enhanced these guaranteed Maximum Ratings as follows: P_D = 1.0 W @ T_C = 25°C, Derate above 25°C − 8.0 mW/°C, T_J = −65 to +150°C, θJC = 125°C/W.

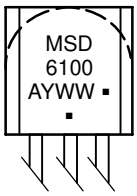
*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.





TO−92
CASE 29−11
STYLE 3

MARKING DIAGRAM



MSD6100 = Device Code
A = Assembly Location
Y = Year
WW = Work Week
▪ = Pb−Free Package
(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping
MSD6100	TO−92	5000 Units / Box
MSD6100G	TO−92 (Pb−Free)	5000 Units / Box
MSD6100RLRA	TO−92	2000/Tape & Reel
MSD6100RLRAG	TO−92 (Pb−Free)	2000/Tape & Reel

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) **(EACH DIODE)**

Characteristic	Symbol	Min	Max	Unit
Breakdown Voltage ($I_{(BR)}$ = 100 μAdc)	$V_{(BR)}$	100	–	Vdc
Reverse Current (V_R = 100 Vdc) (V_R = 50 Vdc) (V_R = 50 Vdc, T_A = 125°C)	I_R	 – – –	 5.0 0.1 50	μAdc
Forward Voltage (I_F = 1.0 mAdc) (I_F = 10 mAdc) (I_F = 100 mAdc)	V_F	 0.55 0.67 0.75	 0.7 0.82 1.1	Vdc
Capacitance (V_R = 0)	C	–	1.5	pF
Reverse Recovery Time (I_F = I_R = 10 mAdc, V_R = 5.0 Vdc, i_{rr} = 1.0 mAdc)	t_{rr}	–	4.0	ns

TYPICAL CHARACTERISTICS

Curves Applicable to Each Anode

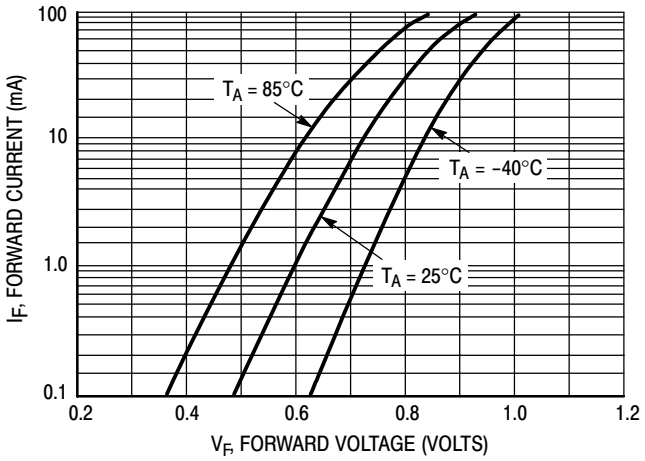


Figure 1. Forward Voltage

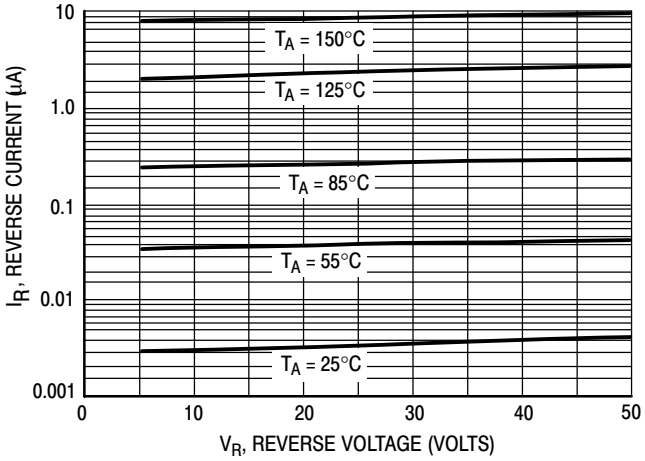


Figure 2. Leakage Current

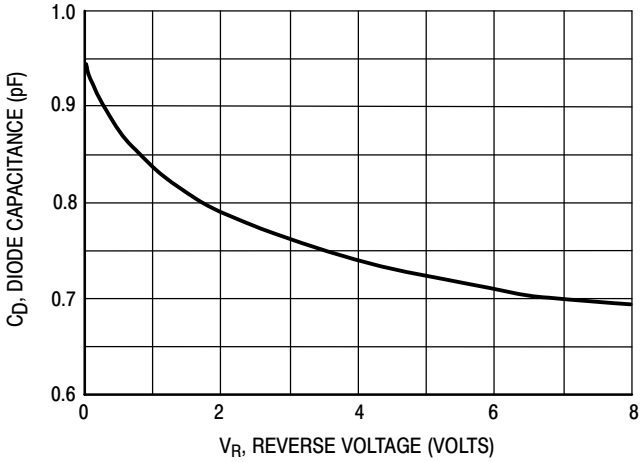
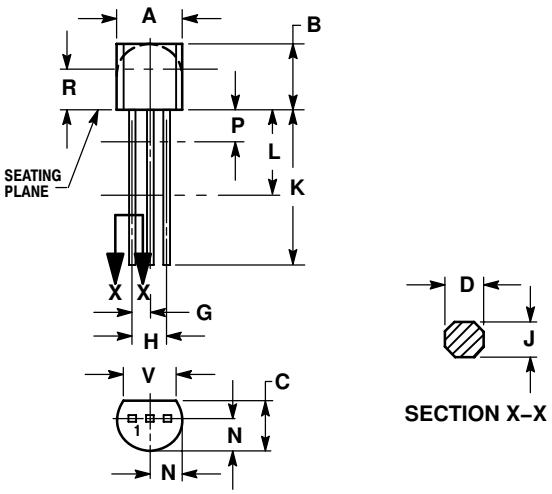


Figure 3. Capacitance

MSD6100

PACKAGE DIMENSIONS

TO−92 (TO−226)
CASE 29−11
ISSUE AL



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.04	2.66
P	---	0.100	---	2.54
R	0.115	---	2.93	---
V	0.135	---	3.43	---

STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

PUBLICATION ORDERING INFORMATION

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For additional information, please contact your local Sales Representative.

MSD6100/D