

# COMPUTER DIODE

## Switching

1N643; JAN 1N643  
 1N662; JAN 1N662  
 1N663; JAN 1N663

### FEATURES

- Metallurgical Bond
- Qualified to MIL-S-19500/256
- Planar Passivated Chip
- DO-7 Package

### DESCRIPTION

This device is particularly suited to applications where medium speed switching is required. Moisture free stability is ensured through hermetic sealing.

### ABSOLUTE MAXIMUM RATINGS, AT 25°C

	1N643 JAN 1N643	1N662 JAN 1N662	1N663	JAN 1N663
Peak Reverse Voltage .....	200V	100V	100V	100V
Reverse Working Voltage .....	175V	80V	80V	80V
Average Rectified Current .....	40mAdc	40mAdc	60mAdc	100mA
Surge Current, 8.3ms .....		500mA		
Operating Temperature Range .....		-65°C to +150°C		
Storage Temperature Range .....		-65°C to +175°C		

### MECHANICAL SPECIFICATIONS

**J 1N643, 1N662, 1N663**

	INCHES	MILLIMETERS
A	.077 - .130	1.96 - 3.30
B	.195 - .300	4.95 - 7.62
C	1.0 - 1.5	25.4 - 38.1
D	.019 - .021	.48 - .53

**DO-7  
 1N643  
 1N662  
 1N663**

**Microsemi Corp.**  
*Watertown*  
 The diode experts

### UNIBOND SWITCHING DIODES

Type	Reverse Breakdown Voltage	Average Forward Current (mA)	Forward Voltage	Reverse Recovery Time (ns)	Junction Capacitance (@ 0V)
1N6638††	150V	300	1.1V @ 200 mA	4.5	2.0pf
1N6642††	100V	300	1.2V @ 100mA	5.0	5.0pf
1N6643††	75V	300	1.2V @ 100mA	6.0	5.0pf
1N4148-1†	100V	200	1.2V @ 100mA	5.0	4.0pf
1N4150-1†	75V	200	1.0V @ 200mA	4.0	2.5pf

† Available as JANTX, JANTXV. †† Available as JANTX, JANTXV, UJANTX, UJANTXV.

### SWITCHING

Type	Reverse Breakdown Voltage (V)	Average Forward Current (mA)	Forward Voltage (V)	Reverse Recovery Time (ns)	Junction Capacitance (pF)
1N4154	35	150	1.0 @ 30mA	2	4
1N4152	40	150	.49-.52 @ 0.1mA	2	2
1N4444	70	200	.44-.55 @ 0.1mA	7	2
1N3064***	75	75	1.0 @ 10mA	4	2
1N4532***	75	125	1.0 @ 10mA	4	2
1N4534***	75	150	.74-.88 @ 20mA	4	2
1N4151	75	150	1.0 @ 50mA	2	2
1N4153***	75	150	.49-.55 @ 0.1mA	2	2
1N4305	75	150	5-.575 @ .25mA	2	2
1N4446	75	150	1.0 @ 20mA	4	4
1N4447	75	150	1.0 @ 20mA	4	2
1N4448	75	150	1.0 @ 100mA	4	4
1N4449	75	150	1.0 @ 30mA	4	2
1N3600***	75	200	.54-.62 @ 1mA	4	2.5
1N4149	75	200	1.0 @ 10mA	4	2
1N4454***	75	200	1.0 @ 10mA	2	2
1N514**	100	75	1.0 @ 10mA	5	4
1N4531***	100	125	1.0 @ 10mA	5	4

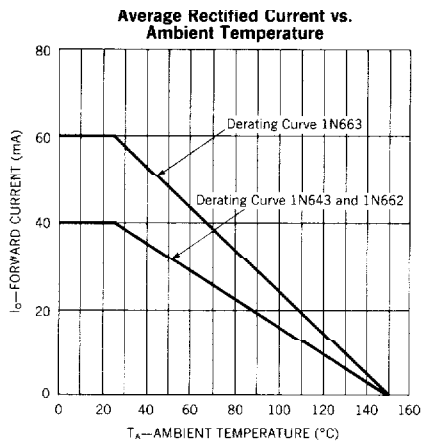
**ELECTRICAL SPECIFICATIONS (at 25°C unless noted)**

Type	Maximum Reverse Current @ 25°C	Maximum Reverse Current @ 25°C	Maximum Peak Reverse Current @ 25°C	Maximum Reverse Current @ 100°C
1N643	25nAdc @ V <sub>R</sub> = 10Vdc	1μAdc @ V <sub>R</sub> = 100Vdc	100μA <sub>PK</sub> @ V <sub>R</sub> = 200V <sub>PK</sub>	15μAdc @ V <sub>R</sub> = 100Vdc
1N662	25nAdc @ V <sub>R</sub> = 10Vdc	5μAdc @ V <sub>R</sub> = 50Vdc	100μA <sub>PK</sub> @ V <sub>R</sub> = 100V <sub>PK</sub>	100μAdc @ V <sub>R</sub> = 50Vdc
1N663	25nAdc @ V <sub>R</sub> = 10Vdc	5μAdc @ V <sub>R</sub> = 75Vdc	100μA <sub>PK</sub> @ V <sub>R</sub> = 100V <sub>PK</sub>	50μAdc @ V <sub>R</sub> = 75Vdc

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**ELECTRICAL SPECIFICATIONS (at 25°C unless noted)**

Type	Maximum Forward Voltage @ 25°C	Capacitance	Maximum Reverse Recovery Time
1N643	1.0Vdc @ I <sub>F</sub> = 10mAdc	3pF @ V <sub>R</sub> = 175V	300ns @ I <sub>F</sub> = 5mA I <sub>R</sub> = 17.5mA I <sub>REC</sub> = 0.2nA
1N662	1.0Vdc @ I <sub>F</sub> = 10mAdc	3pF @ V <sub>R</sub> = 80V	500 ns @ I <sub>F</sub> = 5mA I <sub>R</sub> = 17.5mA I <sub>REC</sub> = 0.4nA
1N662	1.0Vdc @ I <sub>F</sub> = 100mAdc	3pF @ V <sub>R</sub> = 80V	500ns @ I <sub>F</sub> = 5mA I <sub>R</sub> = 17.5mA I <sub>REC</sub> = 0.4nA



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