

# FAST RECOVERY RECTIFIERS

1N5415-1N5420; 1N5615-1N5623; T.03-15  
1N5802-1N5811

## Fast Recovery Rectifiers

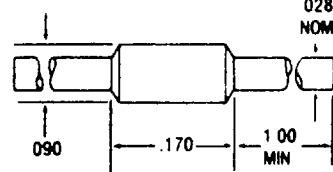
This series of high speed rectifiers are constructed using Optek's "double-slug" technique, a voidless monolithic construction which is free of organics. Intended for both military and industrial service, these devices are ideal as rectifiers and commutating diodes in applications which require speed and ruggedness.

Screened to equivalent per JANTX or JANTXV levels on request

**Axial-leaded  
3 and 5 Watt  
Package  
Voidless  
Construction  
PIV to 1000 Volts**

Type	PIV Vdc	I <sub>F</sub> Adc	V <sub>F</sub> @ I <sub>F</sub> Vdc	I <sub>n</sub> @ PIV μA	I <sub>n</sub> @ PIV @ TA = 175°C mA	T <sub>RR</sub> (0.5A to 1.0A to 0.25A) nsec	Cap. V <sub>R</sub> = 0 pF	Package
1N5415	50	3.0	1.1	1.0	1.0	150	200	B
1N5416	100	3.0	1.1	1.0	2.0	150	175	B
1N5417	200	3.0	1.1	1.0	2.0	150	150	B
1N5418	400	3.0	1.1	1.0	2.0	150	120	B
1N5419	500	3.0	1.1	1.0	2.0	250	110	B
1N5420	600	3.0	1.1	1.0	2.0	400	100	B
					I <sub>n</sub> @ PIV @ TA = 100°C mA		Cap. V <sub>R</sub> = 6V pF	
1N5615	200	1.0	1.2	0.5	1.5	150	45	A
1N5617	400	1.0	1.2	0.5	1.5	150	35	A
1N5619	800	1.0	1.2	0.5	1.5	250	25	A
1N5621	800	1.0	1.2	0.5	1.5	300	20	A
1N5623	1000	1.0	1.2	0.5	1.5	500	15	A
						T <sub>RR</sub> (0.5A to 0.5A to 0.05A) nsec	Cap. V <sub>R</sub> = 10V pF	
1N5802	50	1.0	0.875	1.0	5.0	25	15	A
1N5803	75	1.0	0.875	1.0	5.0	25	15	A
1N5804	100	1.0	0.875	1.0	5.0	25	15	A
1N5805	125	1.0	0.875	1.0	5.0	25	15	A
1N5806	150	1.0	0.875	1.0	5.0	25	15	A
						T <sub>RR</sub> (1.0A to 1.0A to 0.1A) nsec		
1N5807	50	4.0	0.875	5.0	15.0	30	45	B
1N5808	75	4.0	0.875	5.0	15.0	30	45	B
1N5809	100	4.0	0.875	5.0	15.0	30	45	B
1N5810	125	4.0	0.875	5.0	15.0	30	45	B
1N5811	150	4.0	0.875	5.0	15.0	30	45	B

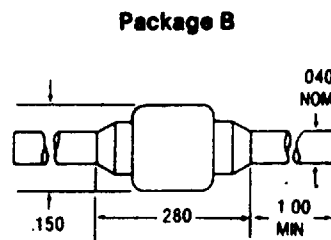
Storage Temperature: -65°C to +175°C  
Operating Temperature: -65°C to +175°C



"A" Package

Leads: 1.25" Nominal OHFC Copper with Solder Dip.

Marking: Part No., Date Code, Cathode Stripe, over Light Blue Background.  
θ: 38°C/Watt Nominal with 3/8" Lead Length.



"B" Package

Leads: 1.1" Nominal OHFC Copper with Solder Dip.

Marking: Part No., Date Code, Cathode Stripe, over Light Blue Background.  
θ: 19°C/Watt Nominal with 3/8" Lead Length

# AXIAL-LEADED FAST RECOVERY RECTIFIERS

T-03-15

Electrical Characteristics (T<sub>case</sub> = 25°C)

Type	PIV Vdc	I <sub>F</sub> Adc	V <sub>F</sub> @ I <sub>F</sub> Vdc	I <sub>R</sub> @ PIV μA	I <sub>surge</sub> * A	T <sub>RR</sub> MAX (1A to 1A to 1/2A) nsec	Package
DSR3050	50	1.0	1.0	5	20	25	A
SVD50 2	50	2.0	1.1	5	20	25	A
SVD50 3	50	3.0	1.0	10	80	25	B
DSR5050	50	4.0	1.0	10	80	25	B
DSR3051	50	1.0	1.1	5	20	50	A
DSR5051	50	4.0	1.1	10	80	50	B
DSR3100	100	1.0	1.0	5	20	25	A
SVD100 2	100	2.0	1.1	5	20	25	A
SVD100 3	100	3.0	1.0	10	80	25	B
DSR5100	100	4.0	1.0	10	80	25	B
DSR3101	100	1.0	1.1	5	20	50	A
DSR5101	100	4.0	1.1	10	80	50	B
DSR3150	150	1.0	1.0	5	20	25	A
SVD150 2	150	2.0	1.1	5	20	25	A
SVD150 3	150	3.0	1.0	10	80	25	B
DSR5150	150	4.0	1.0	10	80	25	B
DSR3151	150	1.0	1.1	5	20	50	A
DSR5151	150	4.0	1.1	10	80	50	B
DSR3200	200	1.0	1.1	5	20	25	A
SVD200 2	200	2.0	1.2	5	20	25	A
SVD200 3	200	3.0	1.1	10	80	25	B
DSR5200	200	4.0	1.1	10	80	25	B
DSR3201	200	1.0	1.2	5	20	50	A
DSR5201	200	4.0	1.2	10	80	50	B

Storage Temperature: -65°C to +175°C  
 Operating Temperature: -65°C to +175°C  
 \*1msec operating surge, T<sub>case</sub> = 100°C, duty cycle <1%

# SCHOTTKY RECTIFIERS

(See Page 3 for Package Dimensions)

Screened to equivalent per JANTX or JANTXV levels on request

Schottky Rectifiers (T<sub>case</sub> = 25°C unless otherwise noted)

Part No.	Case Style	V <sub>RRM</sub> (1) Peak Reverse Voltage (Volts)	V <sub>RWM</sub> (1) Peak Working Reverse Voltage (Volts)	V <sub>FM</sub> (2) Maximum Forward Voltage @ I <sub>F</sub> (Volts dc)	I <sub>F</sub> Average Forward Current @ T <sub>C</sub> (°C) (Amps dc)	I <sub>R</sub> (1) Maximum Reverse Current @ V <sub>RRM</sub> T <sub>C</sub> = 125°C (mA dc)	I <sub>surge</sub> (3) Peak Forward Surge Current (Amps)	θ <sub>Jc</sub> Thermal Resistance Junction-to-Case (°C/W)
SD241 (6) (4)	TO-3	45	35	0.6	20 @ 125°C	100	400	1.4
SD41 (6)	DO 4	45	35	0.55	30 @ 125°C	125	600	2.0
SD51 (6)	DO 5	45	35	0.6	60 @ 125°C	200	800	1.0
SD5171 (6)	DO-203AB DO 5 with Flexible Lead	45	35	0.65	60 @ 125°C	200	800	1.0
SD75 (6)	DO-5	45	35	0.66	75 @ 150°C	150	800	0.8
IN6095	DO 4	36 (5)	30	0.86	25 @ 70°C	250	400	2.0
IN6096	DO 4	48 (5)	40	0.86	25 @ 70°C	250	400	2.0
IN6097	DO 5	36 (5)	30	0.86	50 @ 70°C	250	800	1.0
IN6098	DO-5	48 (5)	40	0.86	50 @ 70°C	250	800	1.0

Notes (1) Voltage pulse width, 400 μsec, duty cycle 1% T<sub>case</sub> = 25°C (2) Current pulse width, 300 μsec, duty cycle 1% T<sub>A</sub> = 25°C (3) Non repetitive 8.35 msec half sine wave (4) Dual unit. Specifications for each diode (5) Non repetitive (6) Trademark of Optek Technology, Inc. as shown or in hyphenated form (example: SD-51)