

FAST RECOVERY RECTIFIER DIODES

- FAST RECOVERY TIME
- LOW FORWARD RECOVERY TIME
- AVAILABLE UP TO 600V



DO 5
(Metal)

APPLICATIONS

- DC AND AC MOTOR CONTROL
- SWITCHMODE POWER SUPPLY
- HIGH FREQUENCY CHOPPERS
- HIGH FREQUENCY RECTIFIERS

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value		Unit
I_{FRM}	Repetitive Peak Forward Current	$t_p \leq 20\mu s$	250	A
$I_{F(AV)}$	Average Forward Current	$T_c = 100^\circ C$	30	A
I_{FSM}	Surge non Repetitive Forward Current	$t_p = 10ms$ Sinusoidal	300	A
P_{tot}	Power Dissipation	$T_c = 100^\circ C$	50	W
T_{stg} T_i	Storage and Junction Temperature Range	– 65 to 150		°C

Symbol	Parameter	1N					BYX 64-600	Unit
		3909	3910	3911	3912	3913		
V_{RRM}	Repetitive Peak Reverse Voltage	50	100	200	300	400	600	V

THERMAL RESISTANCE

Symbol	Parameter	Value		Unit
$R_{th(j-c)}$	Junction-case	1		°C/W

ELECTRICAL CHARACTERISTICS**STATIC CHARACTERISTICS**

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_R	$T_j = 25^\circ C$	$V_R = V_{RRM}$			50	μA
	$T_j = 100^\circ C$				6	mA
V_F	$T_j = 25^\circ C$	$I_F = 30A$			1.4	V

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{rr}	$T_j = 25^\circ C$	$I_F = 1A$	$dI_F/dt = - 15A/\mu s$			200	ns
Q_{rr}	$T_j = 25^\circ C$	$I_F = 1A$	$dI_F/dt = - 15A/\mu s$			0.3	μC
I_{RM}	$T_j = 25^\circ C$	$I_F = 1A$	$dI_F/dt = - 15A/\mu s$			3	A

To evaluate the conduction losses use the following equations :

$$V_F = 1.2 + 0.006 I_F \quad P = 1.2 \times I_{F(AV)} + 0.006 I_F^2(RMS)$$