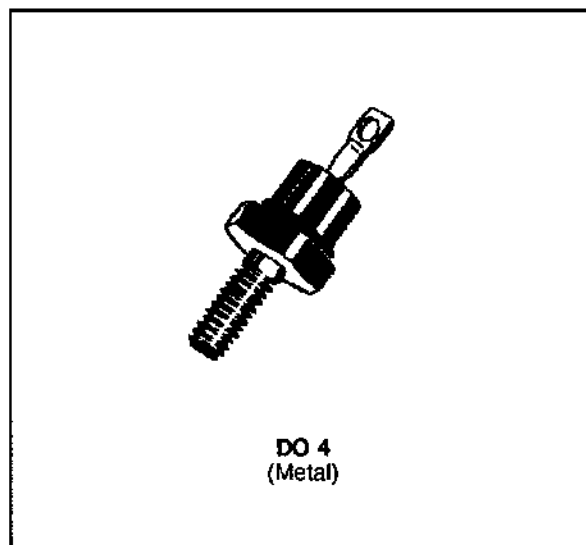


FAST RECOVERY RECTIFIER DIODES

- VERY FAST RECOVERY TIME
- VERY LOW FORWARD RECOVERY TIME
- VERY LOW RECOVERED CHARGE



APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS (limiting values)

Symbol	Parameter		Value	Unit
I_{FRM}	Repetive Peak Forward Current	$t_p \leq 20\mu s$	130	A
$I_F (AV)$	Average Forward Current	$T_C = 100^\circ C$	12	A
I_{FSM}	Surge non Repetitive Forward Current	$t_p = 10ms$ Sinusoidal	150	A
P_{tot}	Power Dissipation	$T_C = 100^\circ C$	20	W
T_{stg} T_J	Storage and Junction Temperature Range		- 65 to 150	$^\circ C$

Symbol	Parameter	BYX61-					Unit
		50	100	200	300	400	
V_{RRM}	Repetitive Peak Reverse Voltage	50	100	200	300	400	V

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction-case	2.5	$^\circ C/W$

ELECTRICAL CHARACTERISTICS**STATIC CHARACTERISTICS**

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
I_R	$T_J = 100^\circ\text{C}$ $V_R = V_{RRM}$			3	mA
V_F	$T_J = 25^\circ\text{C}$ $I_F = 12\text{A}$			1.5	V

RECOVERY CHARACTERISTICS

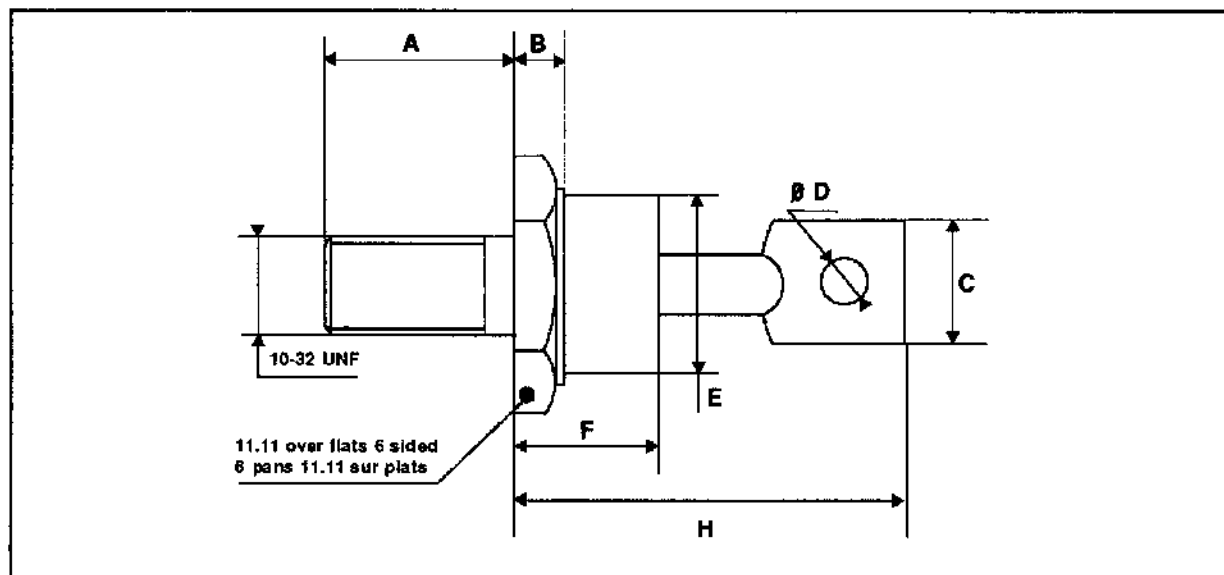
Symbol	Test Conditions	Min.	Typ.	Max.	Unit
t_{rr}	$T_J = 25^\circ\text{C}$ $V_R = 30\text{V}$ $I_F = 1\text{A}$ $di_F/dt = -15\text{A}/\mu\text{s}$			100	ns
Q_{rr}	$T_J = 25^\circ\text{C}$ $V_R = 30\text{V}$ $I_F = 1\text{A}$ $di_F/dt = -15\text{A}/\mu\text{s}$			0.075	μC
I_{RM}	$T_J = 25^\circ\text{C}$ $V_R = 30\text{V}$ $I_F = 1\text{A}$ $di_F/dt = -15\text{A}/\mu\text{s}$			1.5	A

To evaluate the conduction losses use the following equations :

$$V_F = 1.15 + 0.015 I_F \quad P = 1.15 \times I_{F(AV)} + 0.015 I_F^2(RMS)$$

PACKAGE MECHANICAL DATA

DO 4 Metal



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	10.72		11.50	0.422		0.453
B	2.00		4.40	0.079		0.0173
C			6.35			0.25
D	1.53			0.060		
E			10.76			0.424
F			10.28			0.405
H			20.32			0.800

Cooling method : by conduction (method C)

Marking : Cathode connected to case : type number

Anode connected to case : type number + suffix R (consult us for these reserve version datasheets)

Weight : 5.1g

Recommended torque value : 180cm. N

Maximum torque value : 220cm. N

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