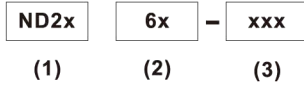


Ultrafast Soft Recovery Rectifier Diode

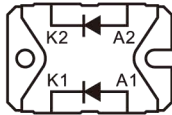
Features

1. Ultrafast Recovery Times
2. High Blocking Voltage
3. Low Losses
4. Low Noise Switching

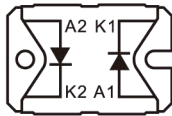
Ordering code



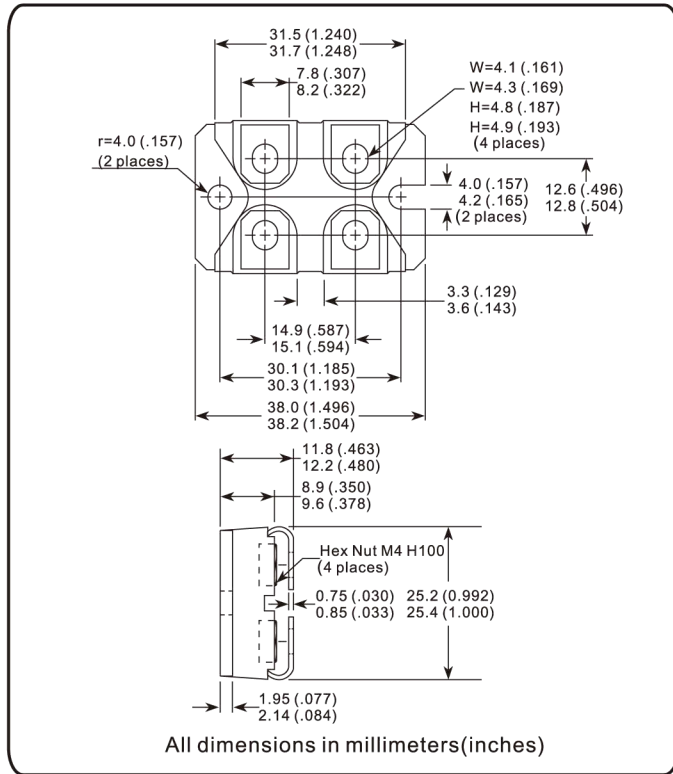
- (1) For Ultrafast Soft Recovery Rectifier
 (2) Maximum average forward current , A
 , Circuit connection
 (3) Voltage code , V (code x 100 = / VRRM)



ND2x61



ND2x60



Electrical Characteristics

Parameter	Condition	Value	Typ.	Max.	Unit
$I_{F(AV)}$	Average forward current	$T_C=50^\circ\text{C}$, Per diode	60		A
$I_{F(RMS)}$	R.M.S. Forward current	Per diode	100		A
V_{RRM}	Repetitive peak reverse voltage	$t_p=10\text{ ms}$ $V_{RMS}=V_{RRM} \times 1.1$	400 to 1200		V
I_{FSM}	Peak one-cycle surge (non-repetitive forward current)	$T_j=45^\circ\text{C}$, 8.3ms	540		A
V_F	Forward conduction threshold voltage	$I_F=120\text{A}$	2.1		V
I_R	Maximum reverse leakage current	$T_j=125^\circ\text{C}$		500	μA
t_{rr}	Reverse recovery time	$I_F=1\text{A}$, $dI_F/dt=-15\text{A}/\mu\text{s}$, $V_R=30\text{V}$, $T_C=25^\circ\text{C}$		70	ns
Q_{rr}	Reverse recovery charge	$I_F=60\text{A}$, $dI_F/dt=-480\text{A}/\mu\text{s}$, $V_R=540\text{V}$, $T_C=25^\circ\text{C}$		500	nC
I_{RRM}	Maximum reverse recovery current			14	A
T_j	Max.operating temperaturerange		-40 to 150		$^\circ\text{C}$
T_{stg}	Storage temperature range		-40 to 150		$^\circ\text{C}$
$R_{th(J-C)}$	Junction to case	Per diode	0.4		$^\circ\text{C}/\text{W}$
		Total	0.25		
W_t	Approximate weight		29		g
T	Busbar to module			2.3 to 2.8	Nm
	Module to heatsink			4.5 to 5.5	

Fig. 1 Forward current versus voltage drop.

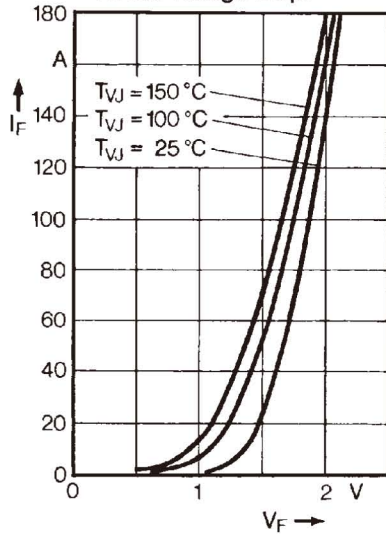


Fig. 2 Recovery charge versus $-di_F/dt$.

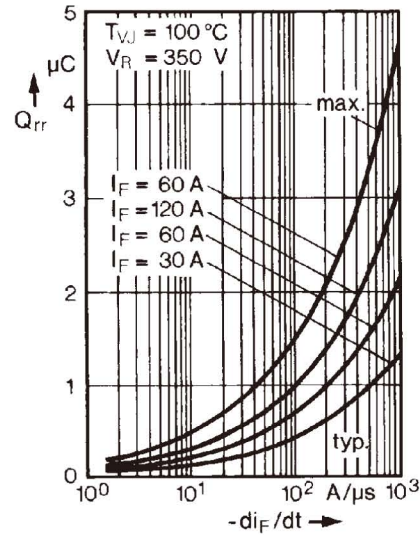


Fig. 3 Peak reverse current versus di_F/dt .

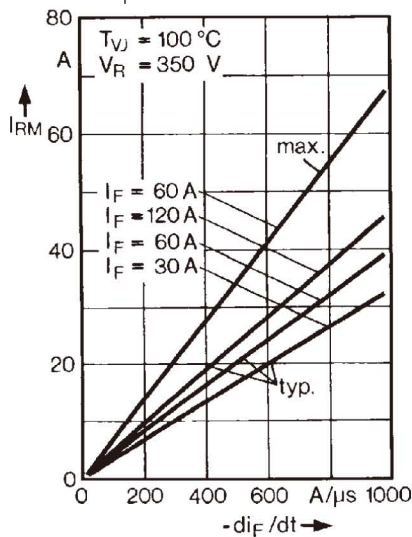


Fig. 4 Dynamic parameters versus junction temperature.

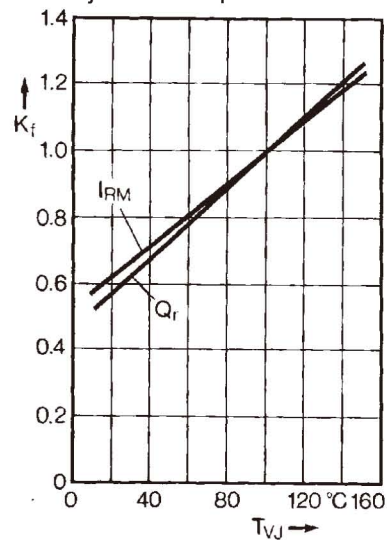


Fig. 5 Recovery time versus $-di_F/dt$.

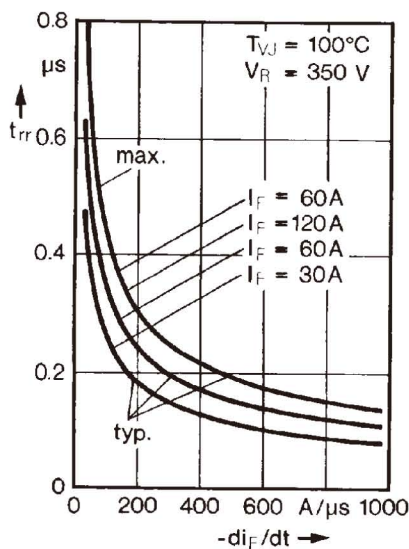


Fig. 6 Peak forward voltage versus di_F/dt .

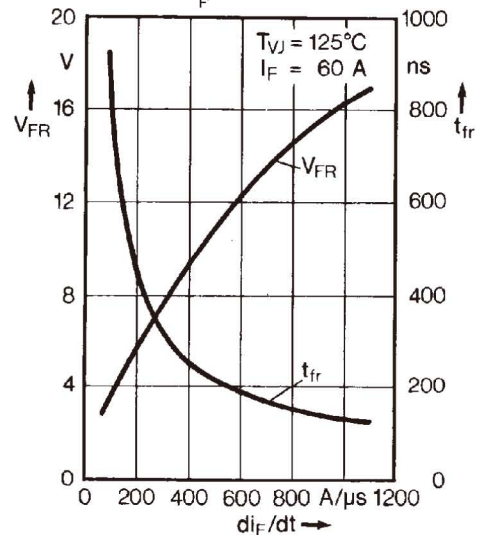


Fig. 7 Transient thermal impedance junction to case.

