

W 2 0 5 2 N C 4 0 0

- Standard Rectifier

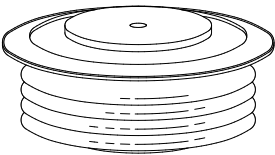
4000 VRRM;

GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All Diffused Structure
- . High Surge rating
- . Blocking capabilty up to 4000 volts
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

CASE 3D



ELECTRICAL CHARACTERISTICS AND RATINGS

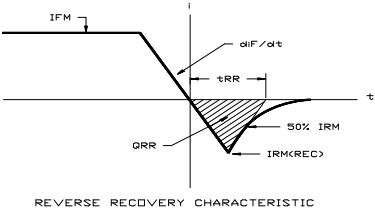
Reverse Blocking

Device Type	VRRM (1)	VRSM (1)
W2052NC400	4000	4100

VRRM = Repetitive peak reverse voltage
VRSM = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage	IRRM	50 mA (3)
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Notes:
All ratings are specified for Tj=25 °C unless otherwise stated.
(1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range -40 to +160 °C.
(2) 10 msec. max. pulse width
(3) Maximum value for Tj = 160 °C.
(4) See parameter definition below :



Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	IF(AV)		2025		A	Sinewave,180° conduction,TH =55°C
Peak one cycle surge (non repetitive) current	IFSM		19500		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, Tj = 175 °C
I square t	I²t		1900000		A²s	10.0 msec
Peak on-state voltage	VFM		1.96		V	IFM = 3800 A; Duty cycle ≤ 0.01% Tj = 160 °C
Reverse Recovery Current (4)	IRM(REC)		*		A	IFM = 1000 A; dIF/dt = 10 A/μs VR=50V
Reverse Recovery Charge (4)	Qrr		*	4200	μC	IFM = 1000 A; dIF/dt = 10 A/μs VR=50V
Reverse Recovery Time (4)	tRR		*	30	μs	IFM = 1000 A; dIF/dt = 10 A/μs VR=50V

* For guaranteed maximum values, contact factory

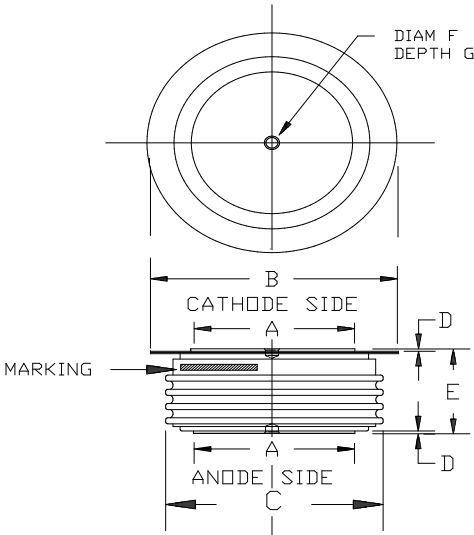
THERMAL AND MECHANICAL CHARACTERISTICS

W2052NC400 - Standard Rectifier

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T _j	-40	+160		°C	
Storage temperature	T _{stg}	-40	+160		°C	
Thermal resistance - junction to sink	R _{Θ(j-h)}		0.022 0.044		°C/W	Double sided cooled Single sided cooled
Mounting force	P	5500 24.5	6000 26.7		lb. kN	
Weight	W			16 460	oz. g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSION



OUTLINE DIMENSIONS - CASE 4D				
DIMENSIONS	Min. mm	Max. mm	Min. In.	Max. In.
DIAM A	43.18	48.26	1.70	1.90
DIAM B	63.50	75.18	2.50	2.96
DIAM C	--	67.31	--	2.65
D	0.76	--	0.03	--
E	25.40	27.18	1.00	1.07
F	3.30	3.81	0.13	0.15
G	1.78	2.03	0.07	0.08

STRIKE DISTANCE = .73 INCH / 18.5 MM MIN.
 CREEPAGE DISTANCE = 1.17 INCH / 29.7 MM MIN.