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## POWER DIODE

# 320NG/RG, 320NF/RF

### FEATURES

- 👉 Available in Normal & Reverse Polarity
- 👉 All Diffused Series
- 👉 Industrial Grade
- 👉 Available in Avalanche Characteristic



STUD

FLAT

# DO9

### TYPICAL APPLICATIONS

- 👉 Power Supplies
- 👉 Machine Tool Controls
- 👉 Battery Chargers
- 👉 Welders

## POWER DIODE

**320NG/RG,  
320NF/RF**



### TECHNICAL DATA

#### DEVICE TYPE

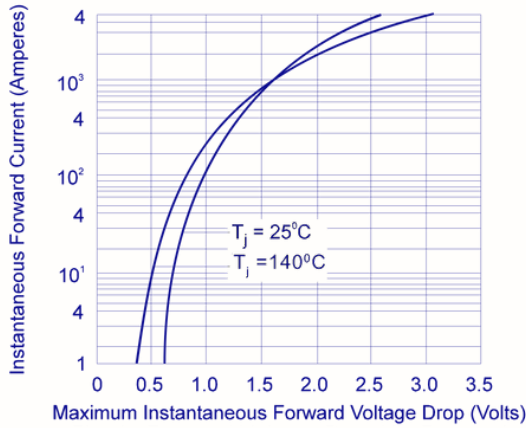
$V_{RRM}$   
(V)

$V_{RSM}$   
(V)

320NG/RG40 320NF/RF40	400	500
320NG/RG120 320NF/RF120	1200	1300
320NG/RG160 320NF/RF160	1600	1700

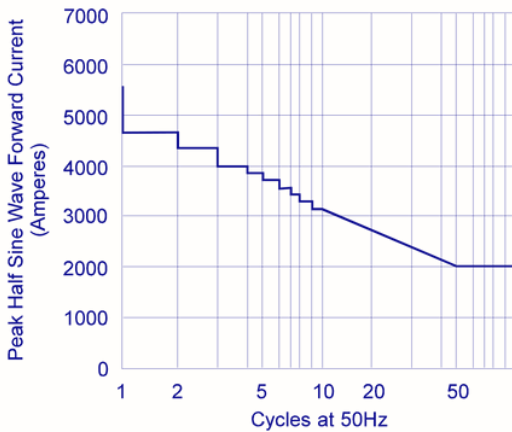
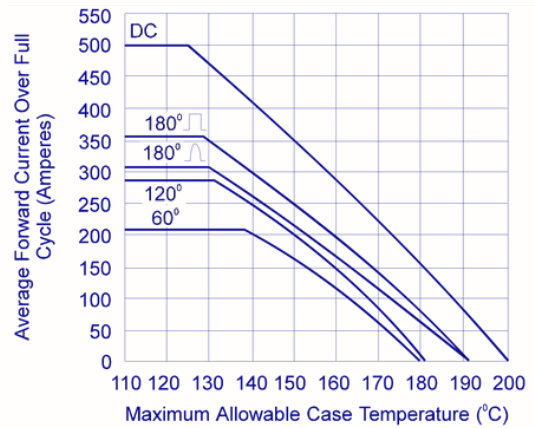
SYMBOL	CONDITIONS	VALUES
$I_{F(AV)}$	Maximum average forward Current $T_c = 130^{\circ}C$	320A
$V_{FM}$	Maximum peak forward Voltage drop @ Rated $I_{F(Peak)}$	1.65 V
$I_{FSM}$	Maximum peak one cycle (non-rep.) surge current 10 msec	5500A
$I^2t$	Max. $I^2t$ rating (non-rep.) for 10 msec	151000 A <sup>2</sup> Sec
$I_{RRM}$	Peak reverse current at $T_{vj} = 175^{\circ}C$	50 mA
$V_0$ $R_0$	$T_{vj} = \text{max}$ $T_{vj} = \text{max}$	0.85 V 0.45 m $\Omega$
$R_{th(j-c)}$ $R_{th(c-h)}$ $R_{th(c-h)}$ $T_{vj}$ $T_{stg}$	Maximum thermal resistance ( Junction to case) Maximum thermal resistance ( Case to heat sink)(NG,RG) Maximum thermal resistance ( Case to heat sink)(NF,RF) Junction temperature Storage temperature	0.12 $^{\circ}C/W$ 0.10 $^{\circ}C/W$ 0.07 $^{\circ}C/W$ 200 $^{\circ}C$ 200 $^{\circ}C$
Mounting torque		30 Nm
Weight	Approx.	260 gms
Package Outline		G,F

**POWER DIODE**  
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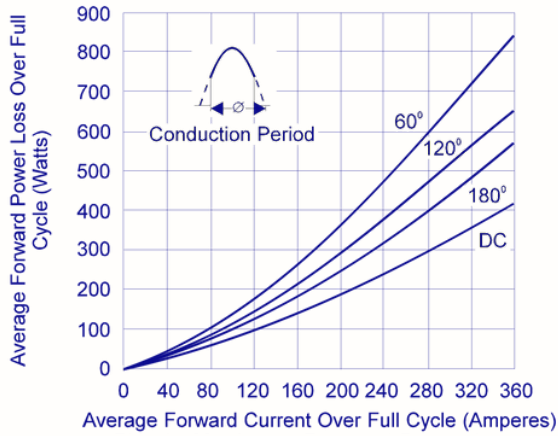
**FIG. 1** forward voltage drop vs. forward current

**FIG. 2** average forward current vs. case temperature



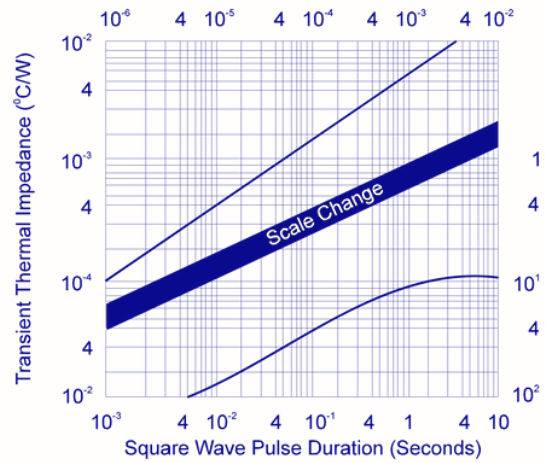
**FIG. 3** maximum non recurrent surge current

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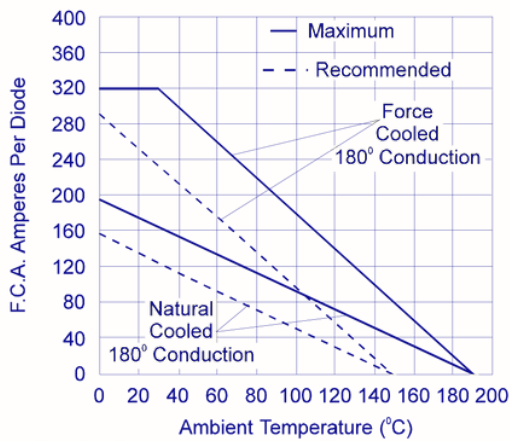


**FIG. 4** maximum forward power loss vs. forward current

**FIG. 5** transient thermal impedance



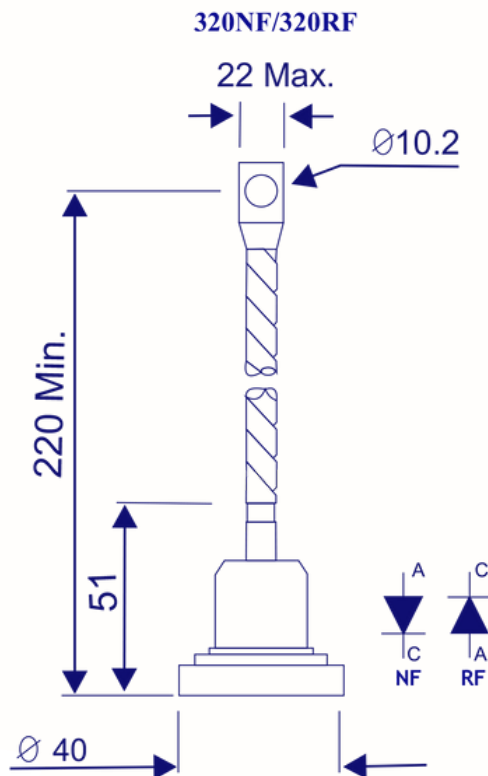
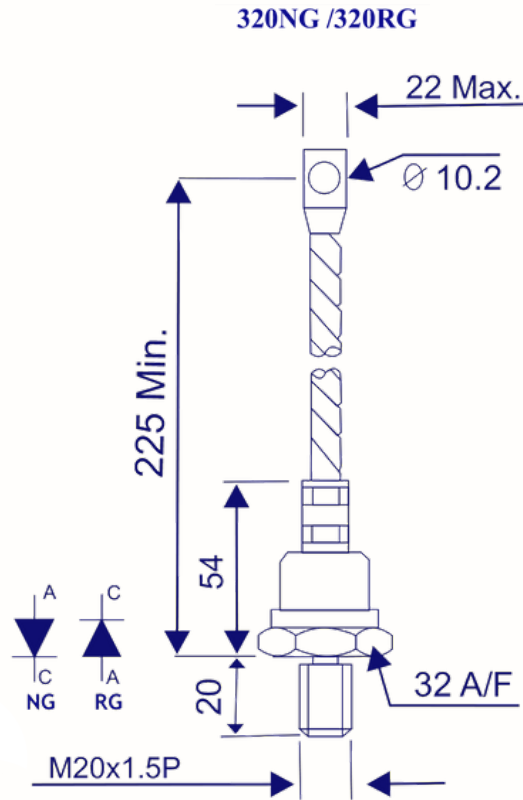
**FIG. 6** diode 320NG/RG mounted on heat sink



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PACKAGE OUTLINE



all dimensions in mm