

## POWER DIODE

# 100ND/RD, 100NE/RE

### FEATURES

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



**STUD**

**FLAT**

# DO8

### TYPICAL APPLICATIONS

- ➡ Power Supplies
- ➡ Machine Tool Controls
- ➡ Battery chargers
- ➡ Welders

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### TECHNICAL DATA

#### DEVICE TYPE

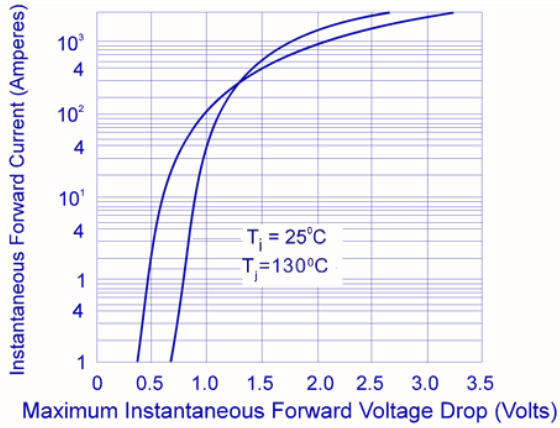
$V_{RRM}$   
(V)

$V_{RSM}$   
(V)

100ND/RD40 100NE/RE40	400	500
100ND/RD120 100NE/RE120	1200	1300
100ND/RD160 100NE/RE160	1600	1700

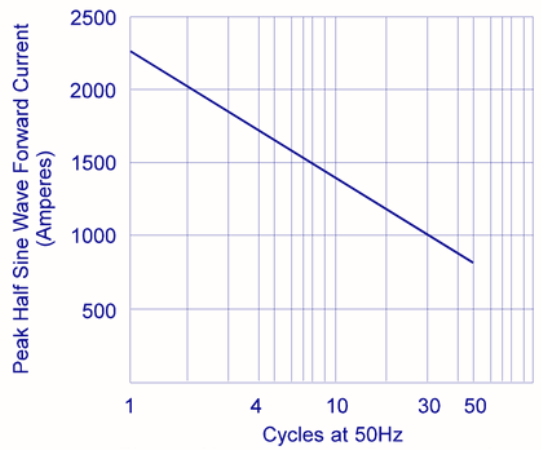
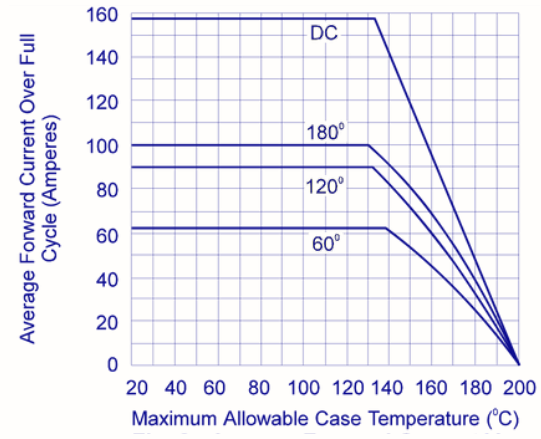
SYMBOL	CONDITIONS	VALUES
$I_{F(AV)}$	Maximum average forward Current $T_c = 130^\circ\text{C}$	100A
$V_{FM}$	Maximum peak forward Voltage drop @ Rated $I_{F(Peak)}$	1.5 V
$I_{FSM}$	Maximum peak one cycle (non-rep.) surge current 10 msec	2200 A
$I^2t$	Max. $I^2t$ rating (non-rep.) for 10 msec	24000 $\text{A}^2\text{Sec}$
$I_{RRM}$	Peak reverse current at $T_{vj} = 175^\circ\text{C}$	15 mA
$V_0$ $R_0$	$T_{vj}=\text{max}$ $T_{vj}=\text{max}$	0.85 V 1.80 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)(ND,RD) Maximum thermal resistance ( Case to heat sink)(NE,RE) Junction temperature Storage temperature	0.40 $^\circ\text{C}/\text{W}$ 0.10 $^\circ\text{C}/\text{W}$ 0.07 $^\circ\text{C}/\text{W}$ 200 $^\circ\text{C}$ 200 $^\circ\text{C}$
Mounting torque		10 Nm
Weight	Approx.	150 gms
Package Outline		D,E

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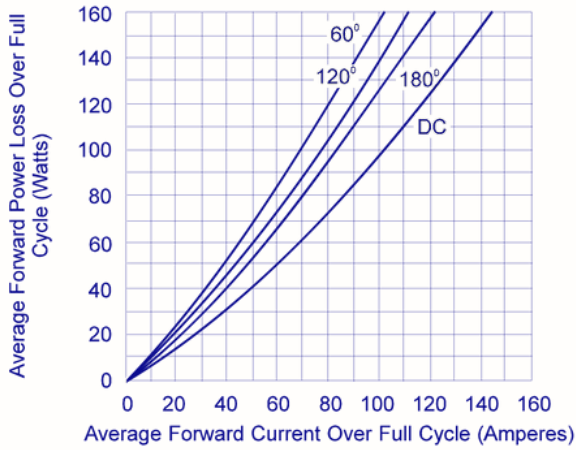
**FIG. 1** forward voltage drop vs. forward current

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



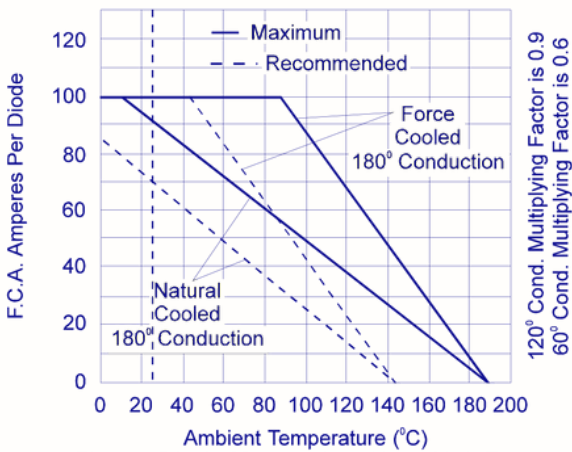
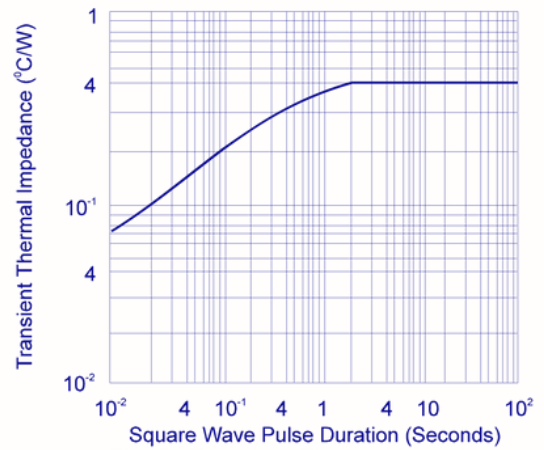
**FIG. 3** maximum non recurrent surge current

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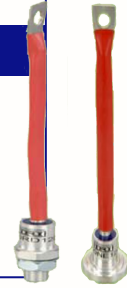
**FIG. 4** average forward power loss vs. forward current

**FIG. 5** transient thermal impedance

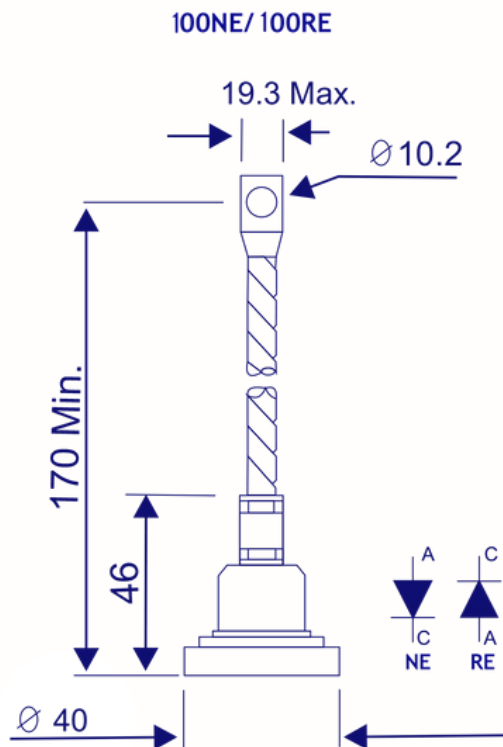
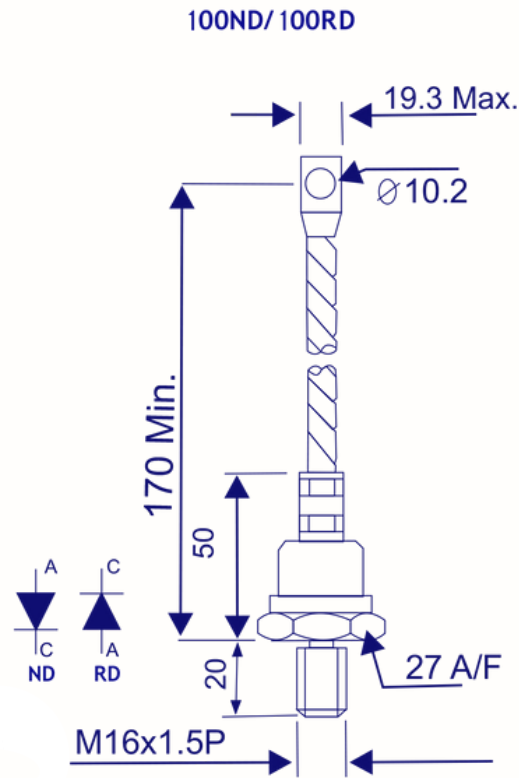


**FIG. 6** diode mounted on heat sink  
type K4 with  $\theta_{HA NC}$  0.95°C / W,  
FC 0.30°C / W

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PACKAGE OUTLINE



all dimensions in mm