

T-03-09

# GENERAL PURPOSE DIODES

1N659  
1N660  
1N661

## ABSOLUTE MAXIMUM RATINGS

- $V_F$  1.0 V @ 6.0 mA
- $T_{RR}$  300 ns

### Temperatures

Storage Temperature Range	-65 °C to +200 °C
Maximum Junction Operating Temperature	+175 °C
Lead Temperature	+260 °C

### Power Dissipation

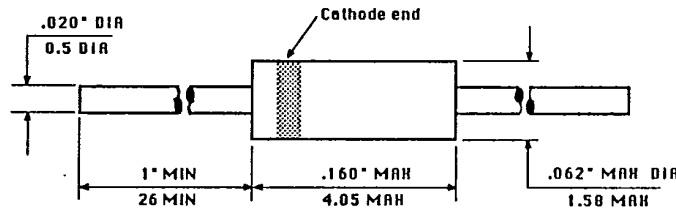
Maximum Total Power Dissipation at 25 °C Ambient	500 mW
Linear Power Derating Factor (from 25 °C)	3.33 mW/ °C

### Maximum Voltage and Currents

		1N659	1N660	1N661
$V_{IV}$	Working Inverse Voltage	50V	100V	200V
$I_O$	Average Rectified Current	200 mA	200 mA	200 mA
$I_F$	Forward Current Steady State	500 mA	500 mA	500 mA
$I_F$ (surge)	Peak Forward Surge Current			
	Pulse Width = 1.0 $\mu$ s	4.0 A	4.0 A	4.0 A
	Pulse Width = 1.0 s	1.0 A	1.0 A	1.0 A

## ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
$V_F$	Forward Voltage	1N659, 1N660, 1N661	1.0	V	$I_F = 6.0$ mA
$I_R$	Reverse Current	1N659	5.0	$\mu$ A	$V_R = 50$ V
			25	$\mu$ A	$V_R = 50$ V, $T_A = 100$ °C
		1N660	5.0	$\mu$ A	$V_R = 100$ V
			50	$\mu$ A	$V_R = 100$ V, $T_A = 100$ °C
	1N661	10	$\mu$ A	$V_R = 200$ V	
			100	$\mu$ A	$V_R = 200$ V, $T_A = 100$ °C
$B_V$	Breakdown Voltage	1N659	60	V	$I_R = 100$ $\mu$ A
		1N660	120	V	$I_R = 100$ $\mu$ A
		1N661	240	V	$I_R = 100$ $\mu$ A
$T_{RR}$	Reverse Recovery Time	1N659, 1N660, 1N661	300	ns	$I_F = 30$ mA, $V_R = 35$ V, $R_L = 2.0$ k $\Omega$ , $C_L = 10$ pF Recovery to 400 k $\Omega$



DO-35 PACKAGE

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## TYPE

1N3070

(SILICON)

## MAXIMUM RATING

STORAGE TEMPERATURE: -65C TO +200C  
 REVERSE VOLTAGE: 200V  
 POWER DISSIPATION: 250mW  
 DERATING FACTOR: 1.5mW/C

## ELECTRICAL REQUIREMENTS

VF	PIV	IR(1)	IR(2)	Trr	C	Re
100mA	100uA	175V	175V	30-30mA	0V	*
25C	25C	25C	150C	25C	25C	25C
1.0V	>200V	0.1uA	100uA	50nS @ 3mA	5Pf	35%

\*VAC= 2Vrms, RL= 5K ohms, CL= 20uuf, f= 100mc

## PACKAGE CONFIGURATION

STANDARD DO-35

## MARKING

BLACK CATHODE BAND &amp; BLACK DIGITAL PRINT

1N  
 35  
 95  
 BKC

## FEATURES

DOUBLE PLUG CONSTRUCTION  
 METALLURGICAL BOND