

## Discrete POWER & Signal Technologies

## FDH3595



## **High Conductance Low Leakage Diode**

Sourced from Process 1M. See MMBD1501-1505 for characteristics.

## **Absolute Maximum Ratings\***

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W <sub>IV</sub>	Working Inverse Voltage	125	V
Io	Average Rectified Current	200	mA
I <sub>F</sub>	DC Forward Current	500	mA
İf	Recurrent Peak Forward Current	600	mA
İ <sub>f</sub> (surge)	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0 4.0	A A
T <sub>stg</sub>	Storage Temperature Range	-65 to +175	°C
TJ	Operating Junction Temperature	175	°C

<sup>\*</sup>These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

These ratings are based on a maximum junction temperature of 200 degrees C.
 These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Thermal Characteristics TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		MMBD7000*	
P <sub>D</sub>	Total Device Dissipation	500	mW
	Derate above 25°C	3.33	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

# High Conductance Low Leakage Diode (continued)

## **Electrical Characteristics**

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B <sub>V</sub>	Breakdown Voltage	$I_R = 100  \mu A$	150		V
I <sub>R</sub>	Reverse Voltage Leakage Current	V <sub>R</sub> = 125 V		1.0	nA
		$V_R = 30 \text{ V}, T_A = 125^{\circ}\text{C}$		300	nA
		$V_R = 125 \text{ V}, T_A = 125^{\circ}\text{C}$		500	nA
		V <sub>R</sub> = 125 V, T <sub>A</sub> = 150°C		3.0	μΑ
V <sub>F</sub>	Forward Voltage	$I_F = 1.0 \text{ mA}$	520	680	mV
		$I_F = 5.0 \text{ mA}$	600	760	mV
		$I_F = 10 \text{ mA}$	650	800	mV
		$I_F = 50 \text{ mA}$	750	890	mV
		$I_F = 100 \text{ mA}$	790	920	mV
		$I_F = 200 \text{ mA}$	0.83	1.0	V
Ст	Diode Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		8.0	pF

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