

Low V_F Schottky Barrier Diode

Feature

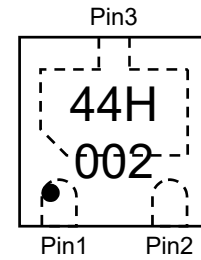
- Forward Current: 4A
- Reverse Voltage: 40V
- Low Forward Voltage
- Low Leakage Current
- Trench MOS Barrier Schottky Technology

Applications

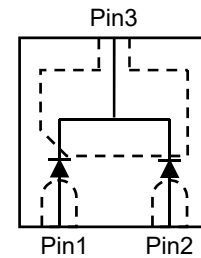
- Low Current Rectification
- Voltage Clamping
- Protection Circuits
- Ultra High-speed Switching

Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C
- Pure tin plating: 7 ~ 17 μm



Marking (Top View)



Circuit Diagram

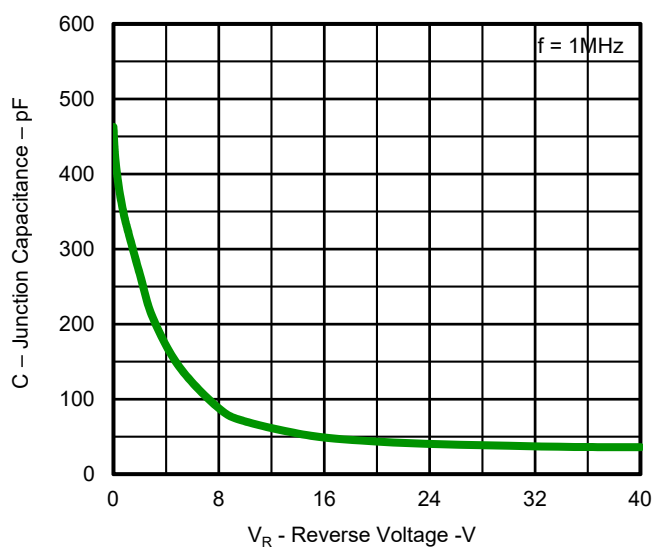
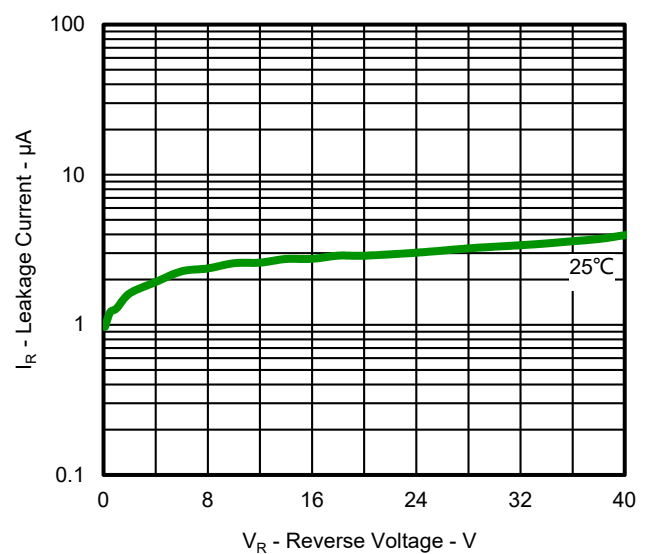
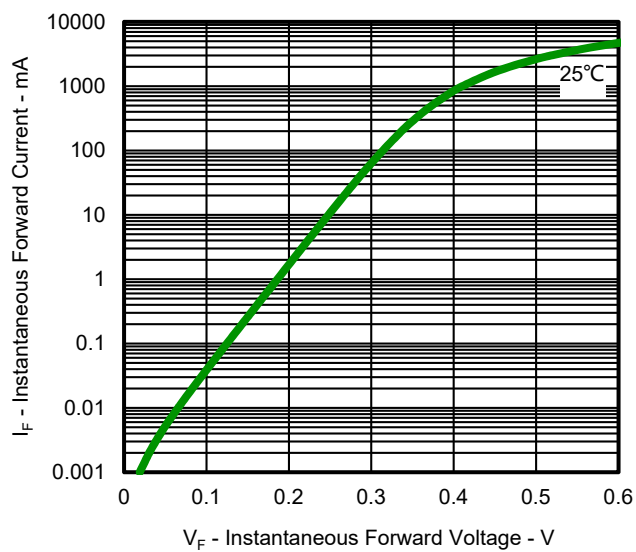
Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	$I_F = 2\text{A}$, Pin1/Pin2 to Pin 3	-	0.47	0.6	V
		$I_F = 4\text{A}$, Pin1&Pin2 to Pin3	-	0.47	0.6	
Reverse Current	I_R	$V_R = 40\text{V}$, Pin3 to Pin1/Pin2	-	-	10	μA
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$, Pin3 to Pin1/Pin2	41	-	-	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin3 to Pin1/Pin2	-	450	-	pF
Reverse Recovery Time	T_{rr}	Pin1/Pin2 to Pin 3	-	50	-	nS

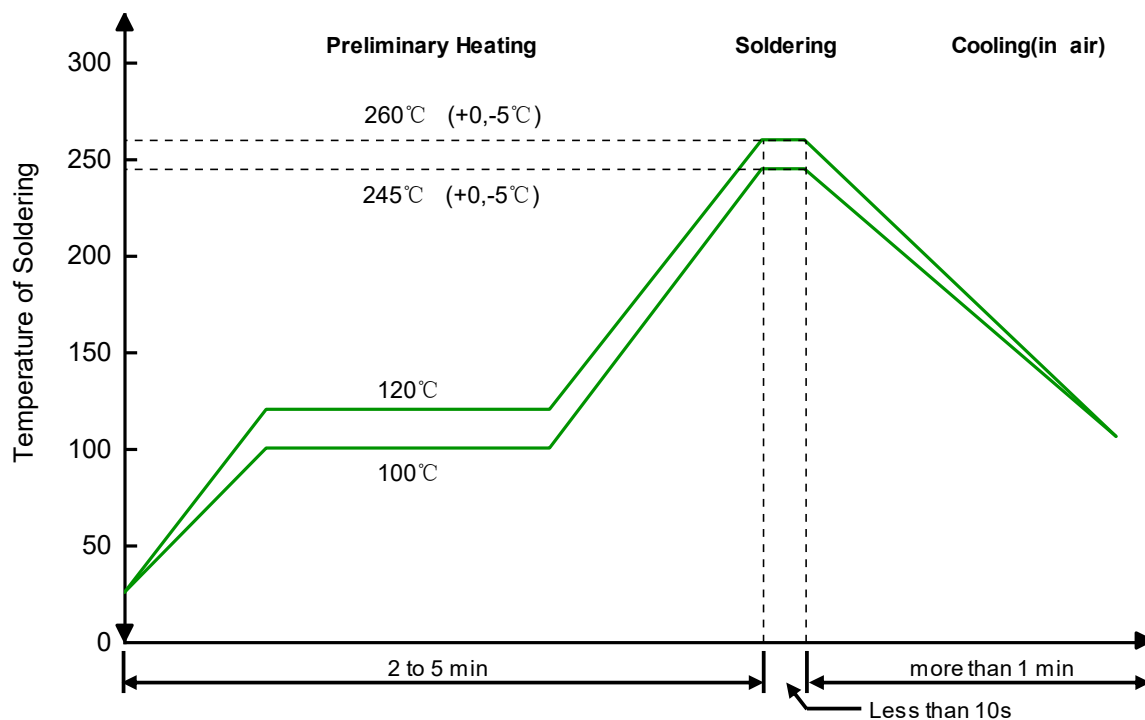
Absolute maximum rating@25°C

Rating		Symbol	Value	Units
Reverse Voltage (DC)		V_{RWM}	40	V
Average Forward Rectified Current	Pin1/Pin2 to Pin 3	I_F	2.0	A
	Pin1&Pin2 to Pin3		4.0	
Peak Forward Surge Current(8.3ms Single Half Sine-wave Superimposed on Rated Load)(Pin1/Pin2 to Pin 3)		I_{FSM}	25	A
Junction and Storage Temperature Range		T_J, T_{STG}	-55~+150	°C
ESD Protection-Contact Discharge		V_{ESD}	± 30	kV
ESD Protection-Air Discharge		V_{ESD}	± 30	kV

Typical Characteristics



Solder Reflow Recommendation

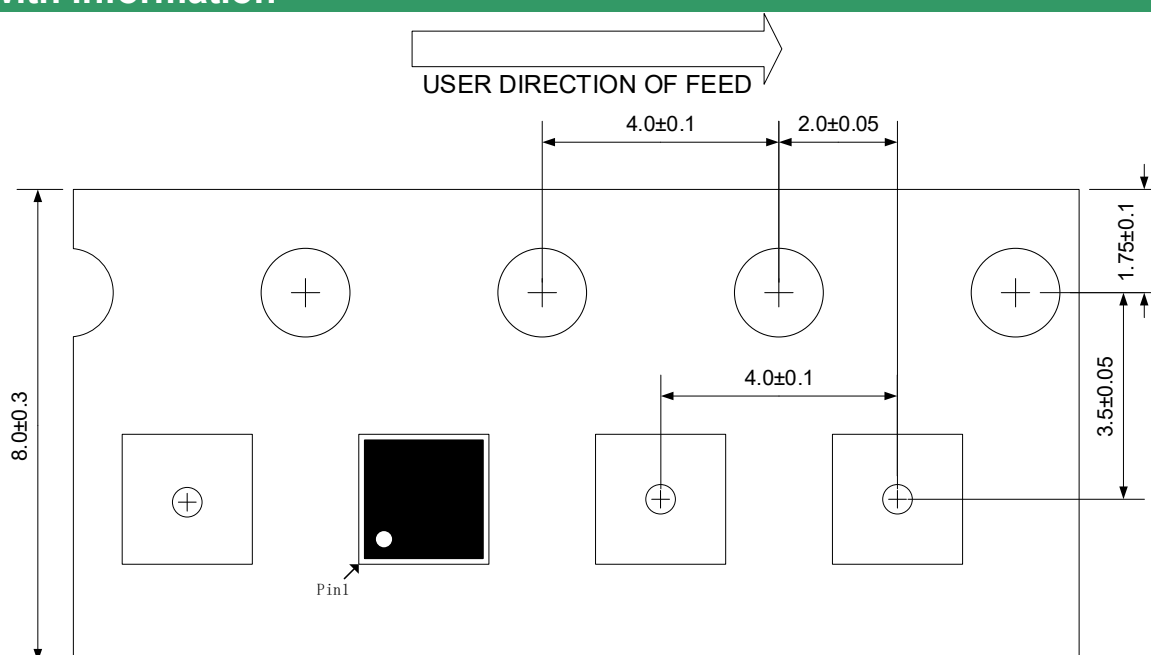


Remark: Pb free for 260°C; Pb for 245°C.

Ordering information

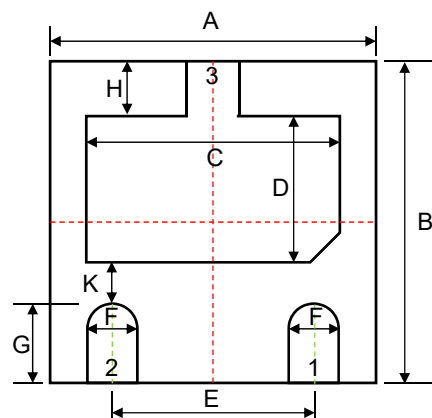
Package	Reel	Shipping
DFN2020-3L	7"	3000 / Tape & Reel

Load with information

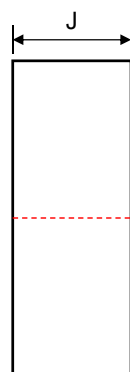


Unit:mm

Product Dimension (DFN2020-3L)

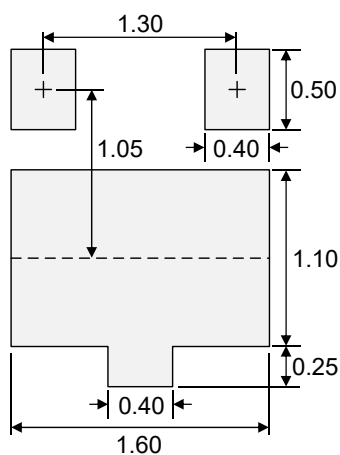


Bottom View



Side View


Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	1.90	2.10	0.075	0.083
B	1.90	2.10	0.075	0.083
C	1.40	1.60	0.055	0.063
D	0.90	1.15	0.035	0.045
E	1.30 BSC		0.051 BSC	
F	0.25	0.35	0.010	0.014
G	0.35	0.45	0.014	0.018
H	0.15	0.30	0.006	0.012
J	0.50	0.60	0.020	0.024
K	0.30 BSC		0.012 BSC	



Suggested PCB Layout

Unit: mm


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