

FEATURES

- | Low Forward Voltage Drop
- | Extremely Small DFN2020-3L Package
- | Surface Device Type Mounting
- | Green EMC
- | Band Indicates Cathode



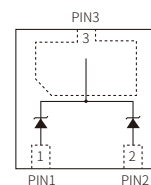
DFN2020-3L



Marking

APPLICATION

- | Low voltage rectification
- | Reverse polarity protection
- | Low power consumption applications



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Maximum repetitive reverse voltage	V_{RRM}	40	V
Maximum DC blocking reverse voltage	V_R	40	V
Average Forward Current	$I_{F(AV)}$	2	A
Peak Forward Surge Current (At 8.3ms single half sine-wave)	I_{FSM}	20	A
Operating Junction Range	T_J	-50 to 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-50 to 150	$^{\circ}\text{C}$
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	63	$^{\circ}\text{C}/\text{W}$

These ratings are limiting values above which the serviceability of the diode may be impaired.

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=1\text{A}$		0.37	0.42	V
		$I_F=2\text{A}$			0.50	V
Reverse Leakage Current	I_R	$V_R=40\text{V}$			80	μA
Breakdown Voltage	V_{BR}	$I_R=0.1\text{mA}$	40			V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		340	400	pF

CHARACTERISTIC CURVES

Fig.1 Typical Forward Current Derating Curve

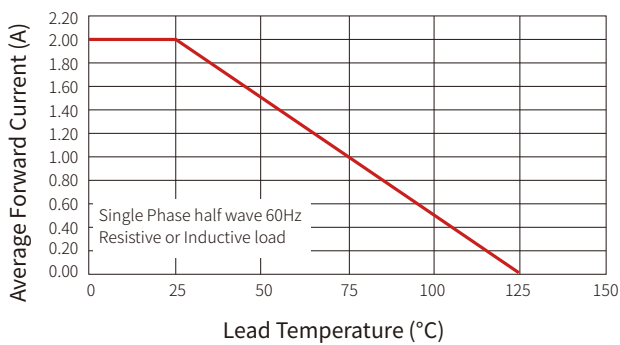


Fig.2 Total Capacitance vs. Reverse Voltage

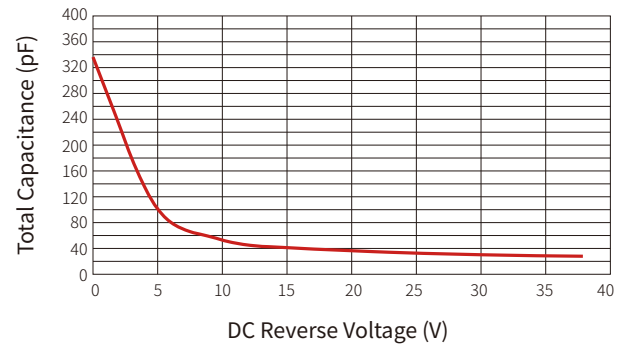
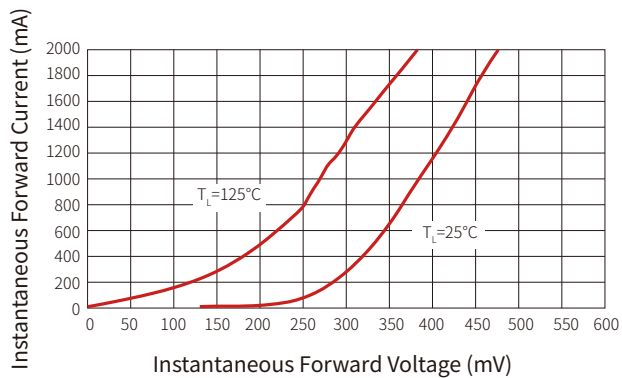
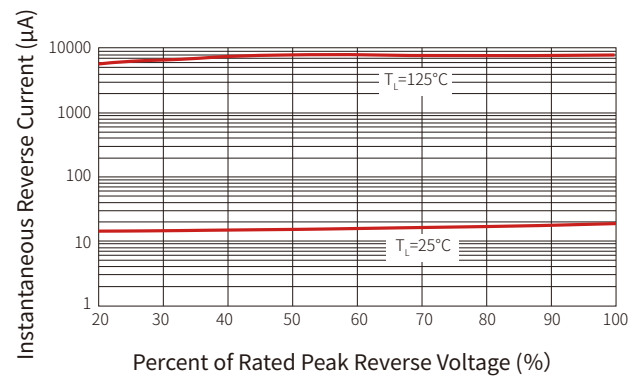
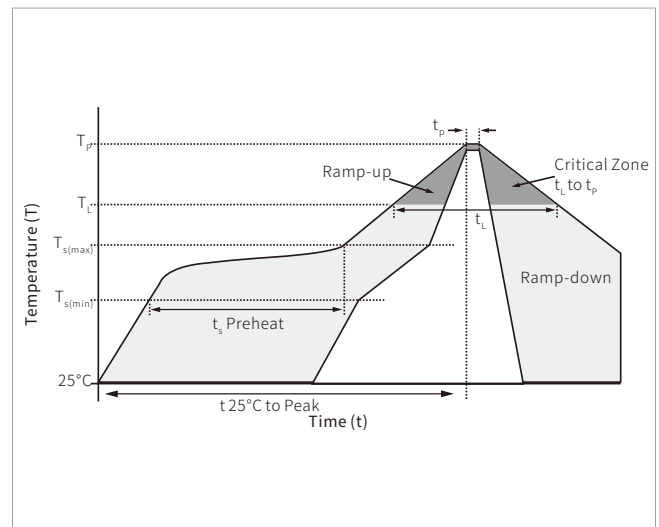


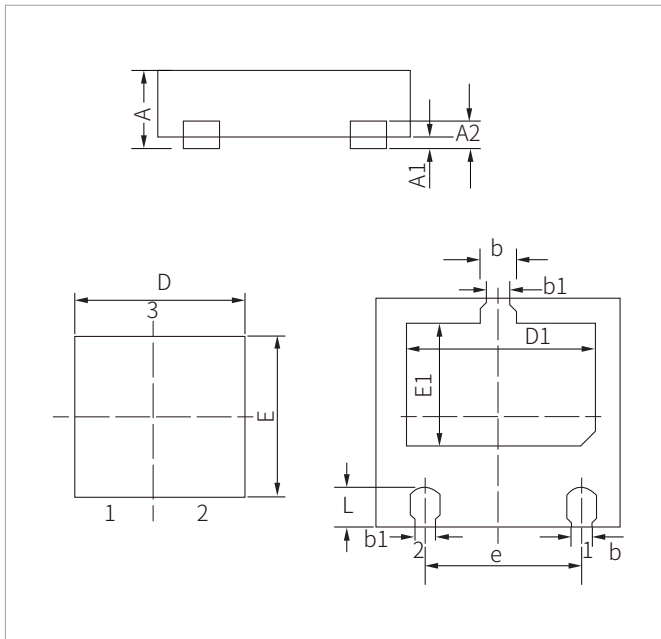
Fig.3 Typical Instantaneous Forward Characteristics

Fig.4 Typical Reverse Characteristics


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150°C
	Temperature Max ($T_{s(\max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

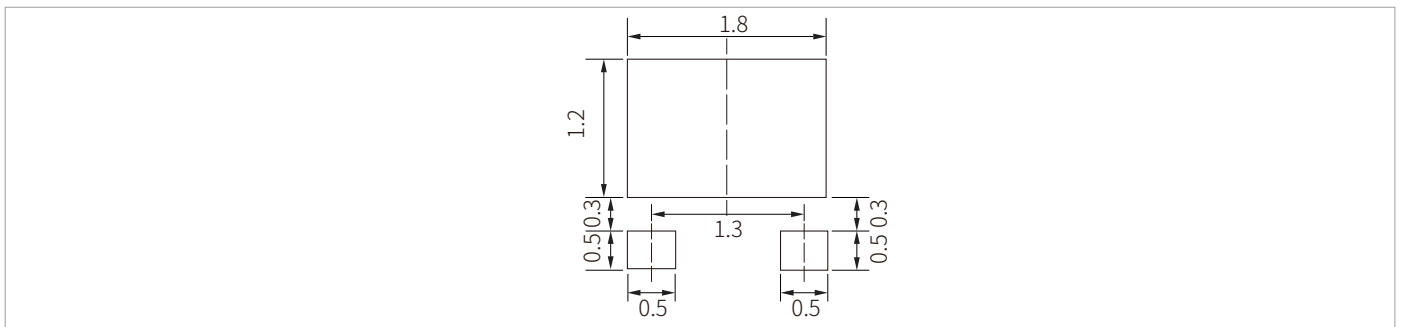


DFN2020-3L PACKAGE INFORMATION



Ref.	Millimeters		
	Min.	Typ.	Max.
A	0.45	0.55	0.65
A1	-	0.00	0.05
A2	0.152BSC		
D	1.80	2.00	2.20
E	1.80	2.00	2.20
b	0.15	0.20	0.25
b1	0.25	0.30	0.35
D1	1.45	1.50	1.55
E1	1.00	1.05	1.10
e	1.30BSC		
L	0.35	0.40	0.45

RECOMMENDED PAD LAYOUT DIMENSIONS



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
RB2040HHCT	DFN2020-3L	3000PCS	7"

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