LN1F60

General Rectifying Diodes
600V, 1.1A

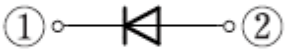
Feature

- Small SMD
- Low Noise
- Low VF
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): 1F
Package (JEDEC Code): DO-214AC

Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	T_{stg}		-55 to 150	℃
Junction temperature	T_j		-55 to 150	℃
Repetitive peak reverse voltage	V_{RRM}		600	V
Average forward current	$I_{F(AV)}$	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	1.1	A
Average forward current	$I_{F(AV)}$	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.8	A
Surge forward current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25°C	25	A
Surge forward current	I_{FSM1}	tp=1ms, sine wave, Non-repetitive, peak value, Tj=25°C	80	A

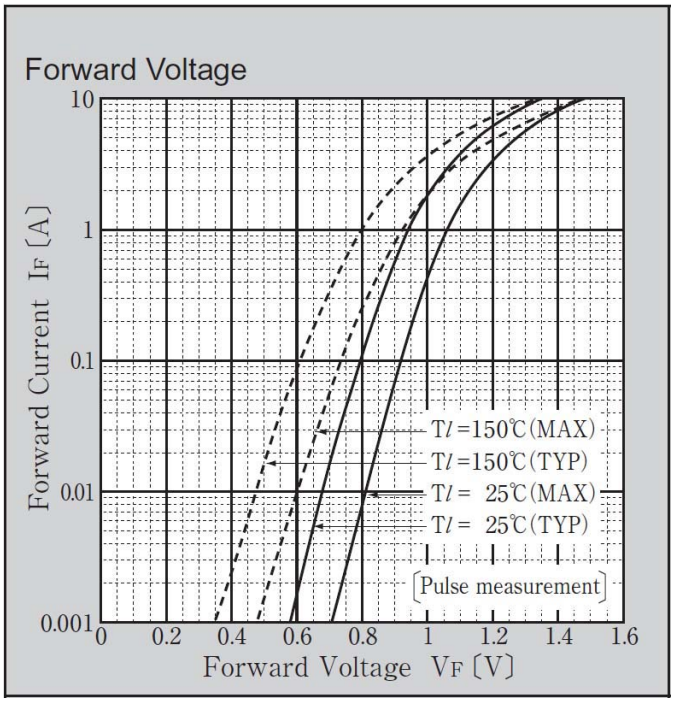
※ ：See the original Specifications

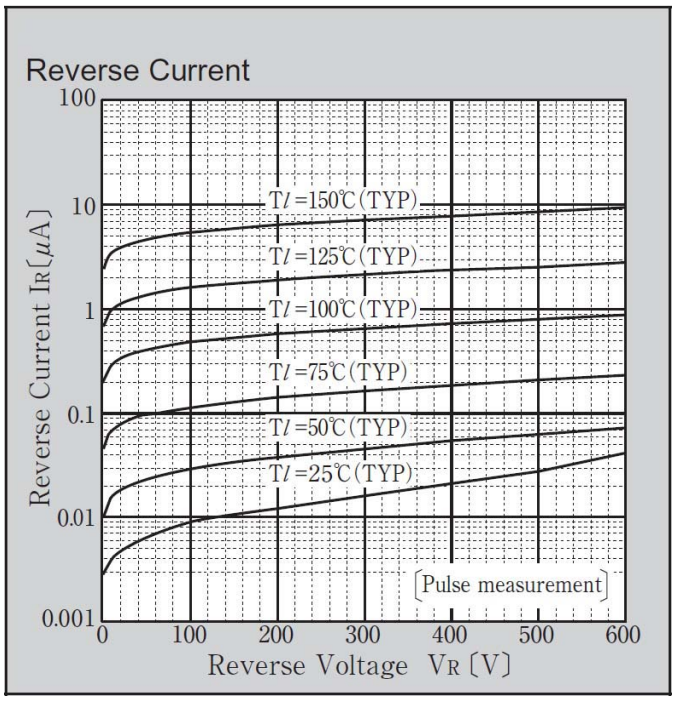
Electrical Characteristics (unless otherwise specified : Tl=25°C)

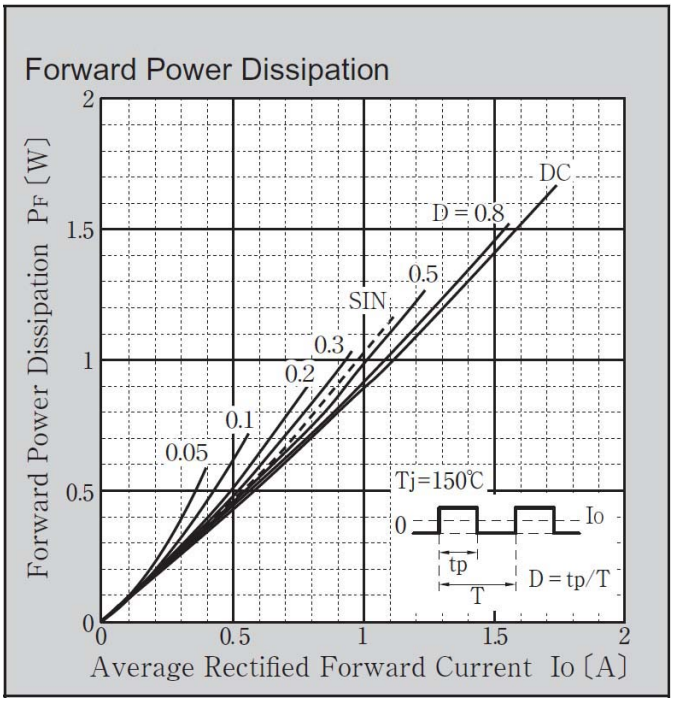
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF＝0.8A, Pulse measurement			1.05	V
Reverse current	I_R	VR=600V, Pulse measurement			10	μA
Reverse recovery time	t_{rr}	IF=0.1A, IR=0.1A, 0.1IR			3.5	μs
Thermal resistance	$R_{th(j-l)}$	Junction to lead			23	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate ※			108	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate ※			157	°C/W

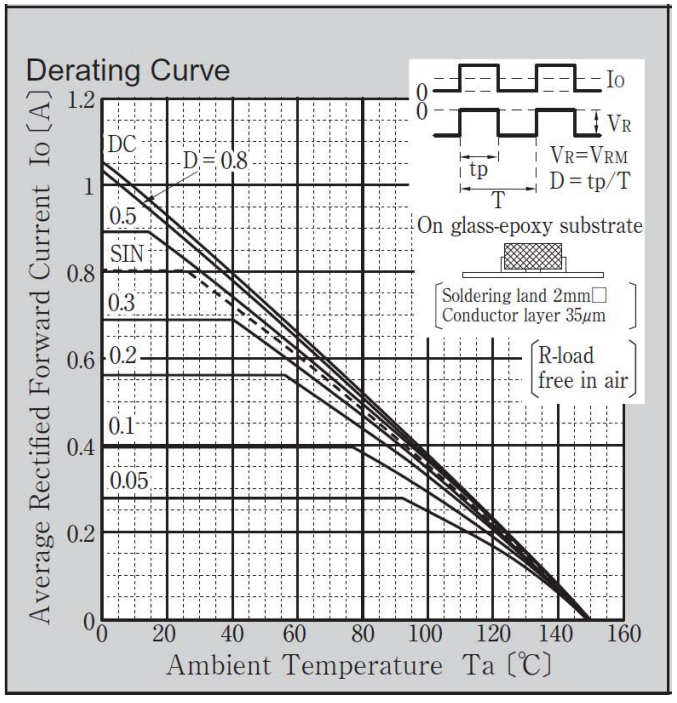
※ ：See the original Specifications

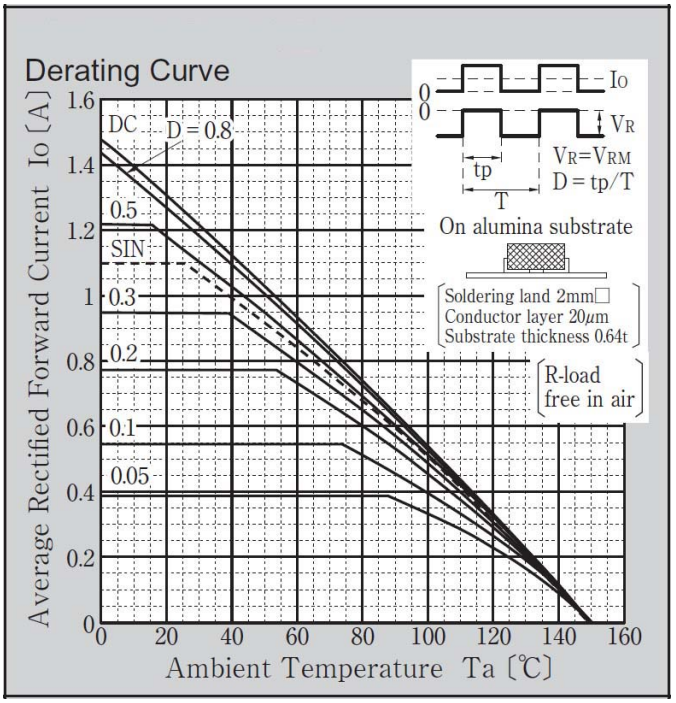
CHARACTERISTIC DIAGRAMS

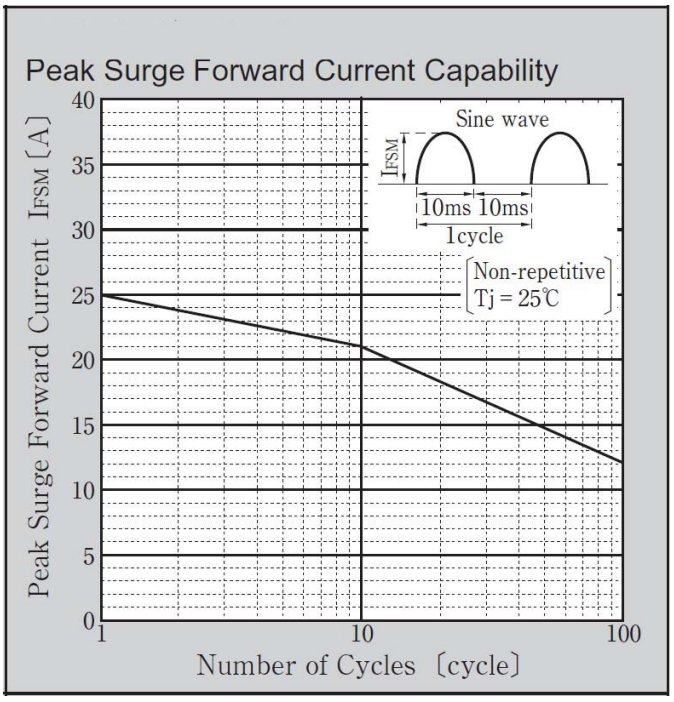


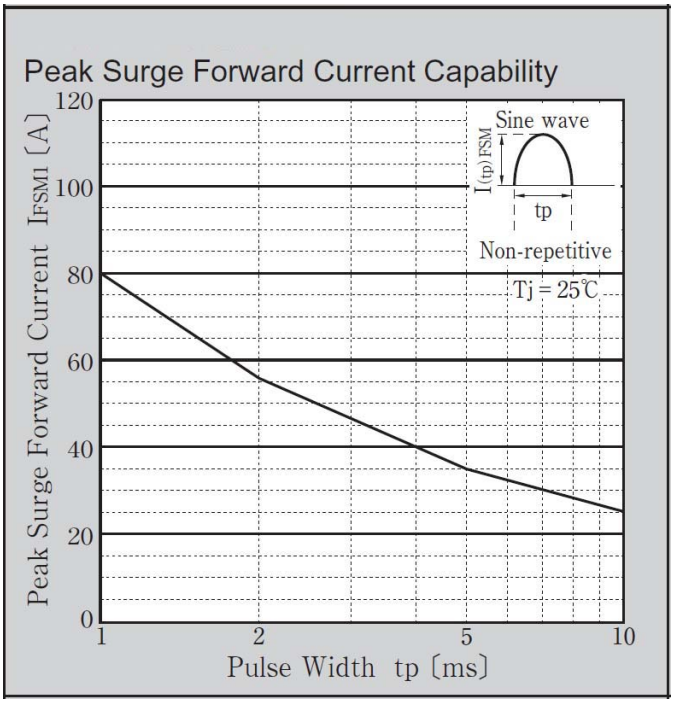


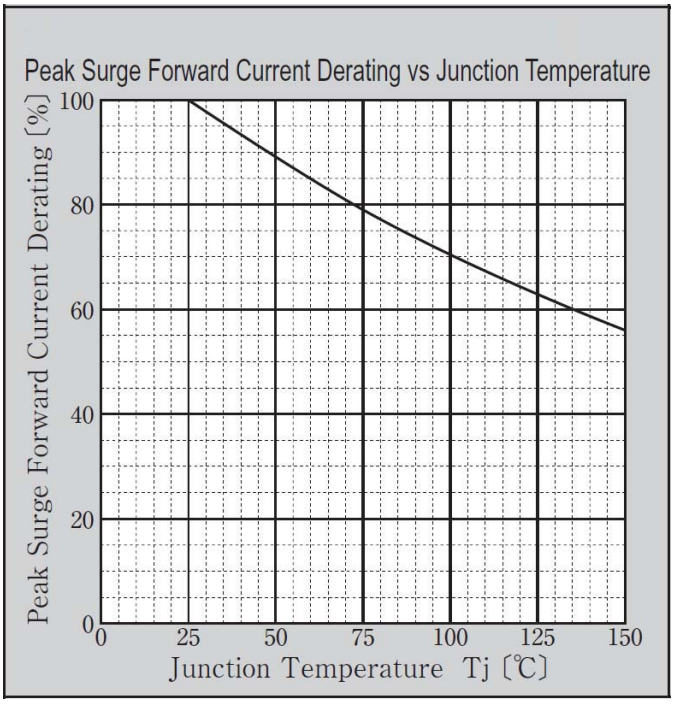


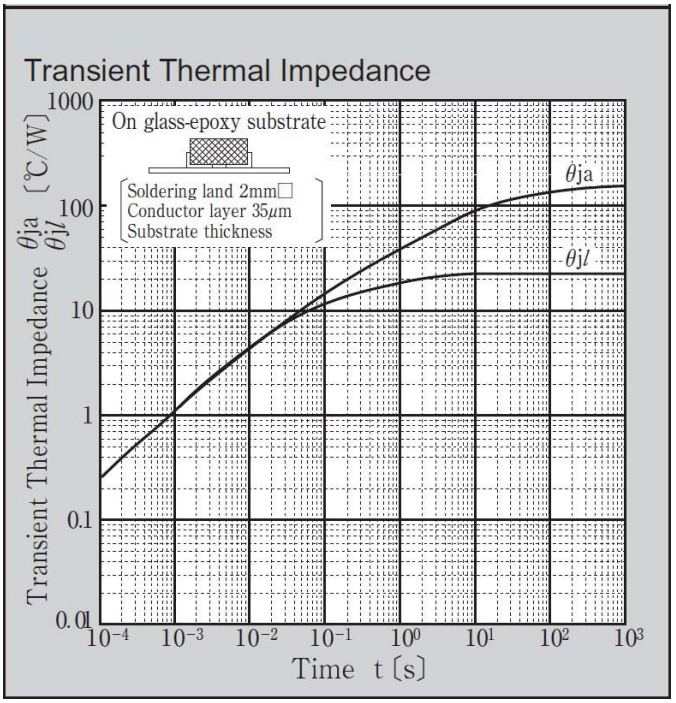


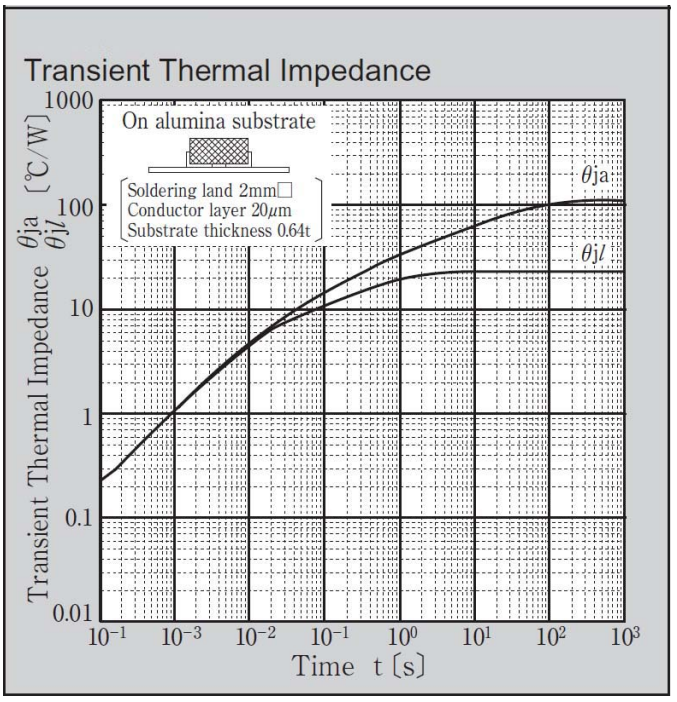

Derating Curve
Average Rectified Forward Current Io〔A〕
Ambient Temperature Ta〔℃〕
DC
D = 0.8
0.5
SIN
0.3
0.2
0.1
0.05
Io
VR
tp
T
VR=VRM
D = tp/T
On alumina substrate
Soldering land 2mm□
Conductor layer 20μm
Substrate thickness 0.64t
R-load
free in air


Peak Surge Forward Current Capability
Peak Surge Forward Current IFSM〔A〕
Number of Cycles〔cycle〕
Sine wave
IFSM
10ms 10ms
1cycle
Non-repetitive
Tj = 25℃


Peak Surge Forward Current Capability
Peak Surge Forward Current IFSM〔A〕
Pulse Width tp〔ms〕
Sine wave
I(tp)FSM
tp
Non-repetitive
Tj = 25℃


Peak Surge Forward Current Derating vs Junction Temperature
Peak Surge Forward Current Derating〔%〕
Junction Temperature Tj〔℃〕


Transient Thermal Impedance
On glass-epoxy substrate
Soldering land 2mm□
Conductor layer 35μm
Substrate thickness
θja
θjl
Transient Thermal Impedance θja θjl (℃/W)
1000
100
10
1
0.1
0.01
10−4 10−3 10−2 10−1 100 101 102 103
Time t (s)


Transient Thermal Impedance
On alumina substrate
Soldering land 2mm□
Conductor layer 20μm
Substrate thickness 0.64t
θja
θjl
Transient Thermal Impedance θja θjl (℃/W)
1000
100
10
1
0.1
0.01
10−1 10−3 10−2 10−1 100 101 102 103
Time t (s)

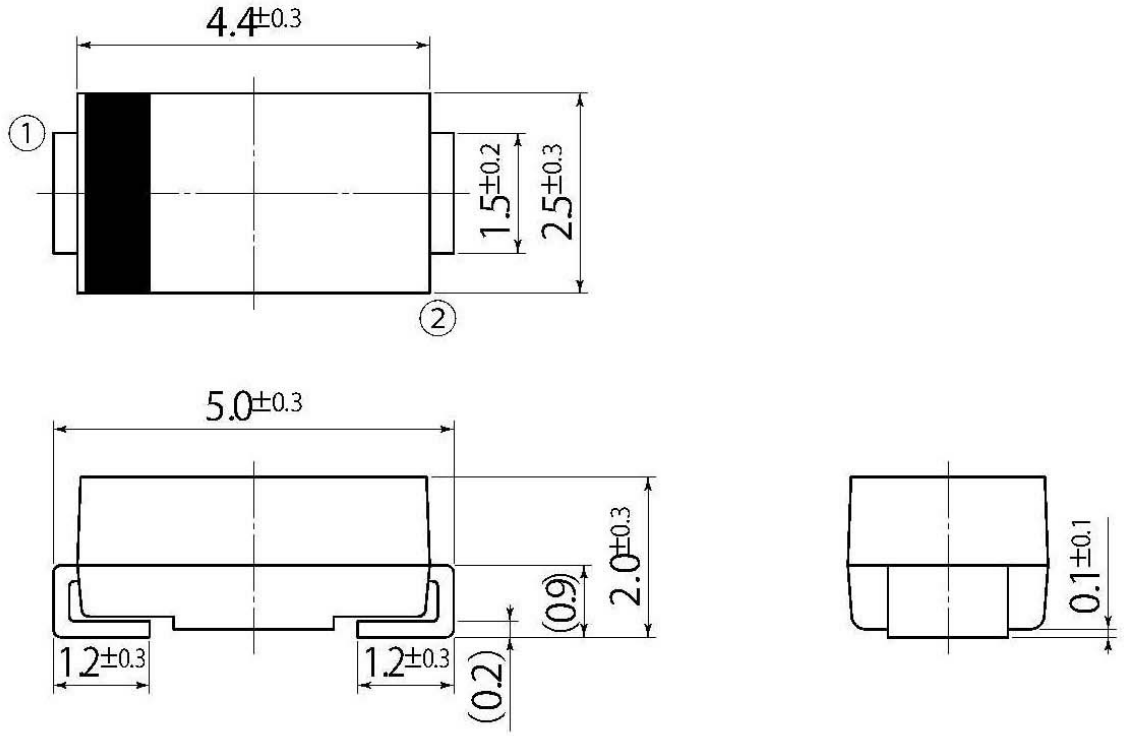
Outline Dimensions

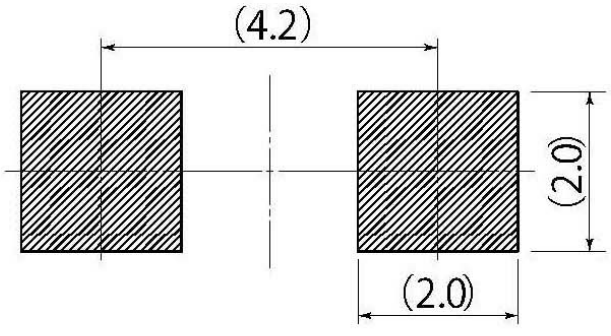
unit:mm

scale: 10/1

B3

JEDEC Code	DO-214AC
JEITA Code	–
House Name	1F, CF





Referential Soldering Pad

・Optimize soldering pad to the board design and soldering condition.

Notes

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