

D1FK120P

Fast Recovery Diodes
1200V, 1.0A

Feature

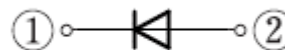
- Small SMD
- High Voltage
- Low Noise
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

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 temperature	T _{stg}		-55 to 150	°C
Junction temperature	T _j		-55 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		1200	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, Tl=79°C	1	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.38	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25°C	18	A

※ :See the original Specifications

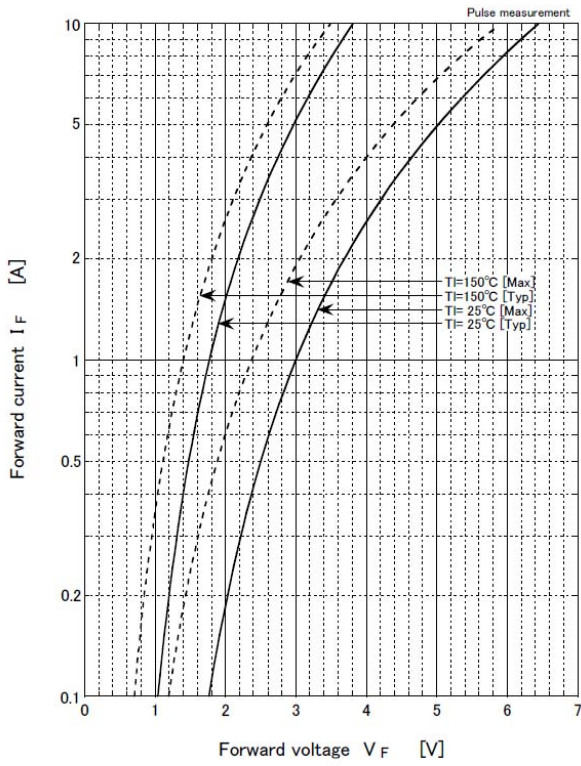
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=1A, Pulse measurement			3	V
Reverse current	I_R	VR=1200V, Pulse measurement			10	μ A
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			85	ns
Total capacitance	Ct	f=1MHz, VR=10V		4.7		pF
Thermal resistance	Rth(j-l)	Junction to lead			23	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			157	°C/W

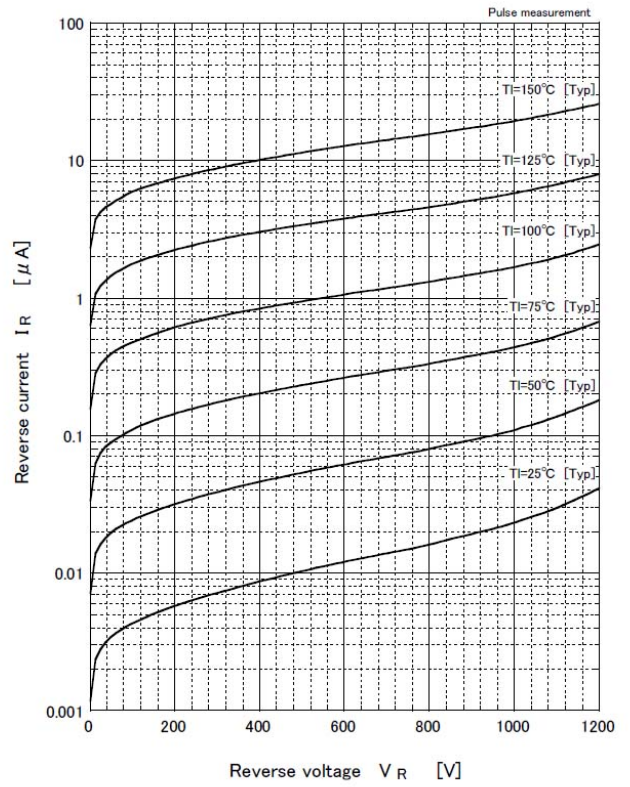
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

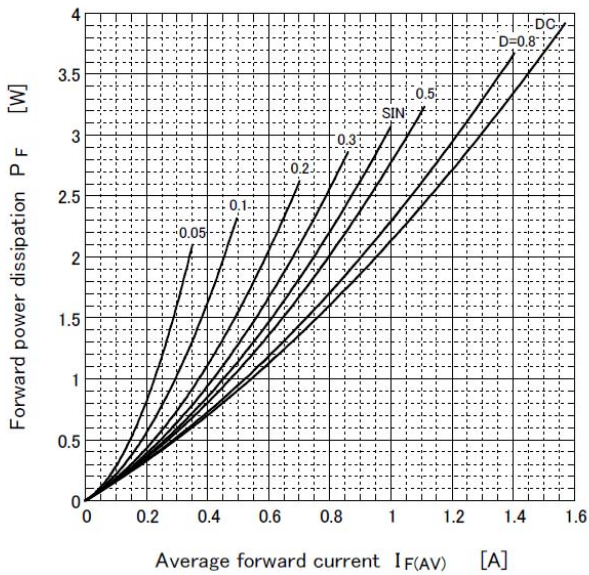
Forward voltage



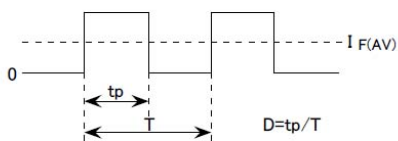
Reverse current



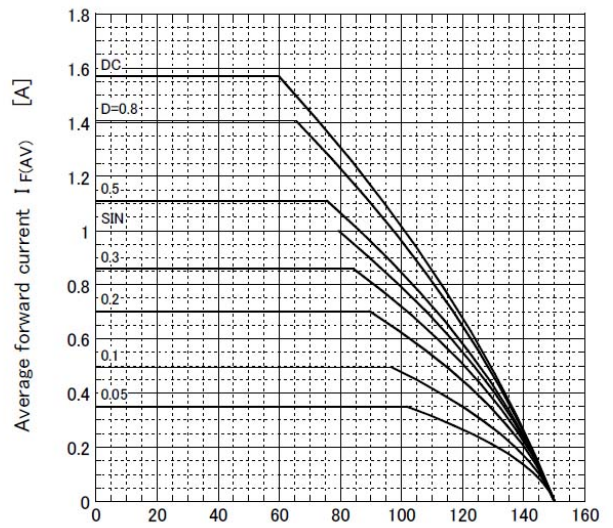
Forward power dissipation



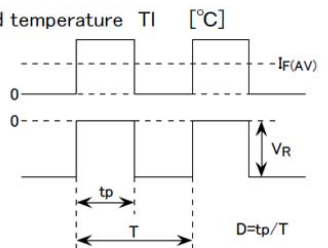
● $T_J=150^\circ\text{C}$



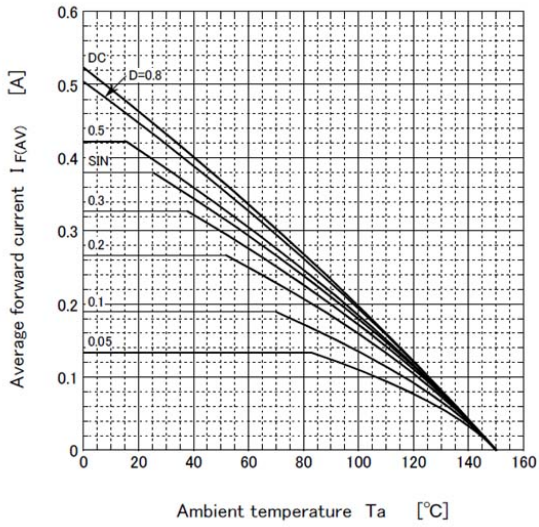
Derating curve



● $V_R=1200\text{V}$
R-load
Free in air



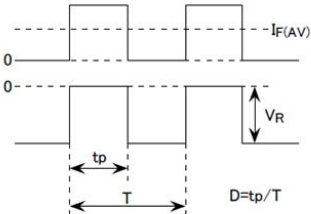
Derating curve



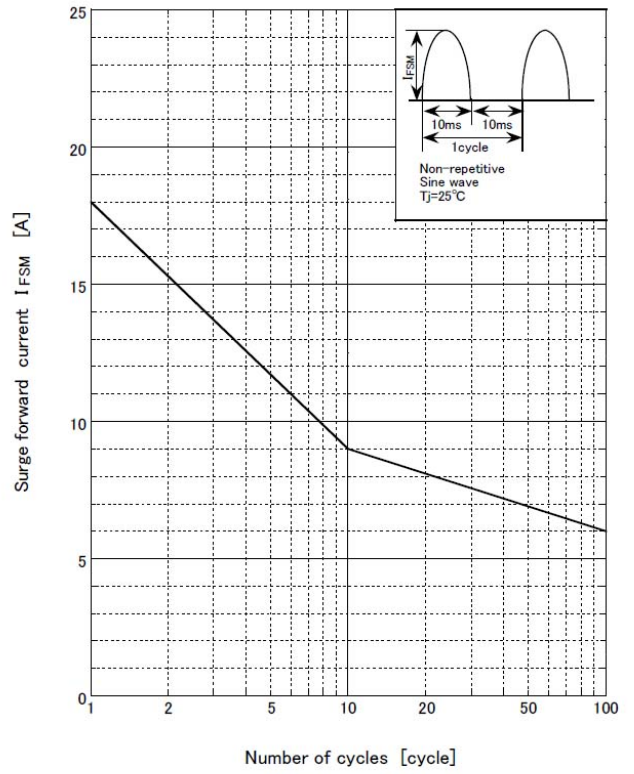
● $V_R = 1200V$
 R-load
 Free in air

● Substrate detail

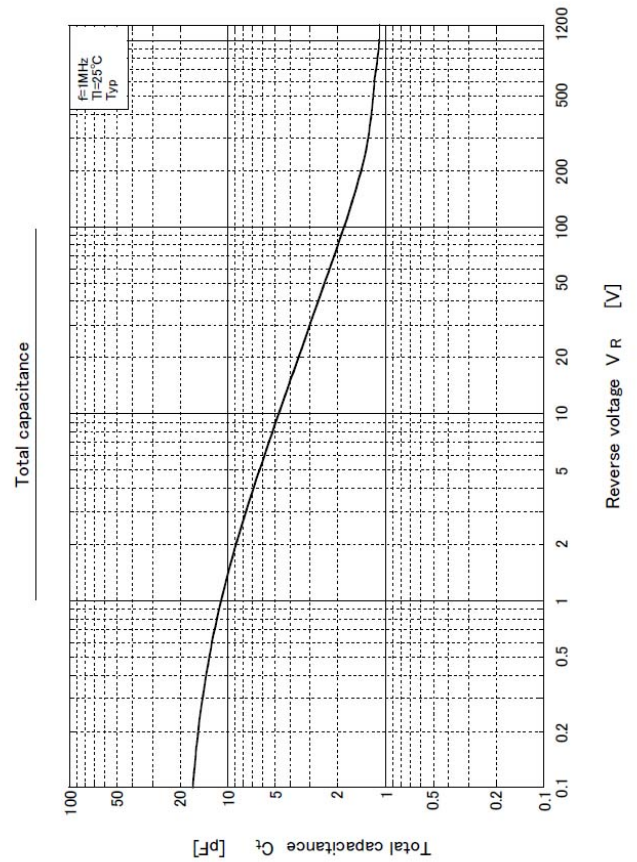
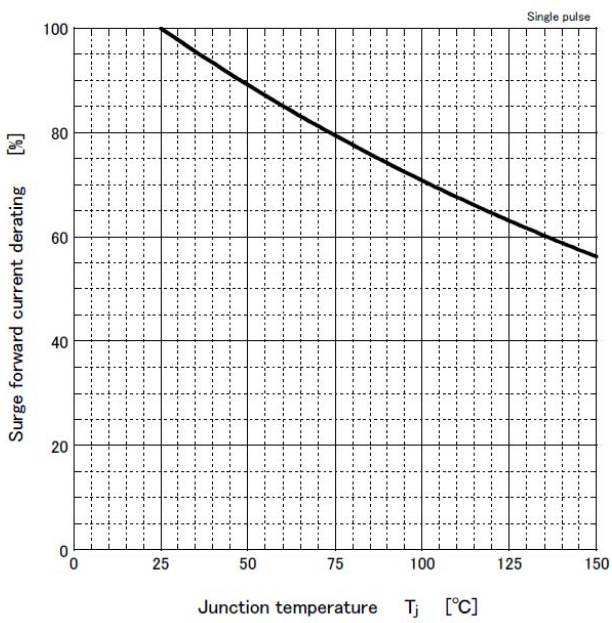
Type	Glass/epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35 μm
Pattern area	47.8mm ²

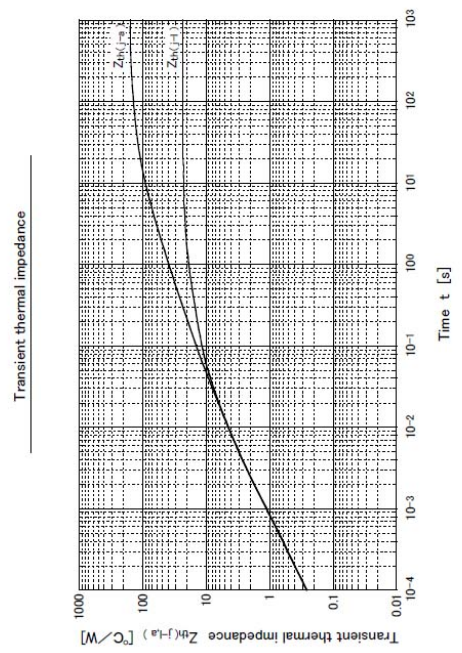


Surge forward current capability



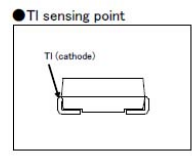
Surge forward current derating vs Junction temperature





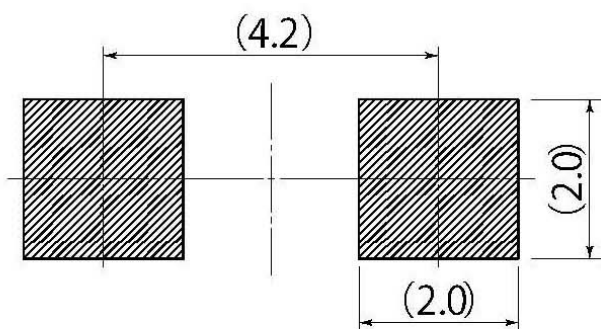
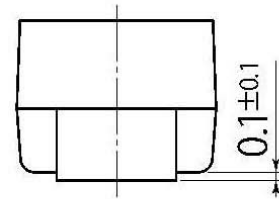
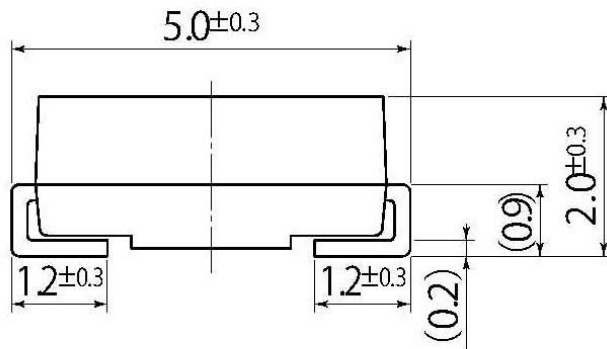
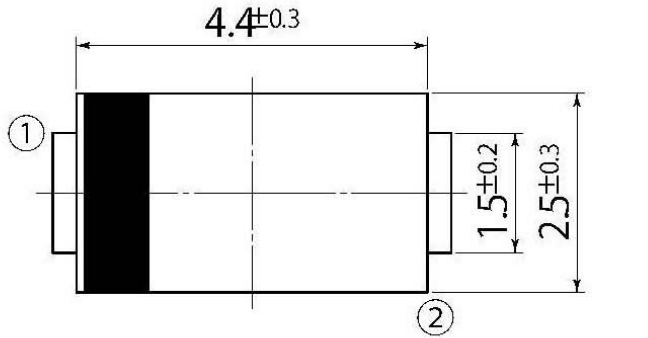
● Substrate detail

Type	Glass epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35 μm
Pattern area	47.8mm ²



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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