

D1FK100
Fast Recovery Diodes
1000V, 1A

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 temperrature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V _{RRM}		1000	V
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, Tl=97°C	1	A
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, On alumina substrate, Ta=25°C ※	0.62	A
Average forward current	I _F (AV)	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※	0.47	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25°C	20	A
Surge forward current	I _{FSM1}	tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25°C	55	A

※ :See the original Specifications

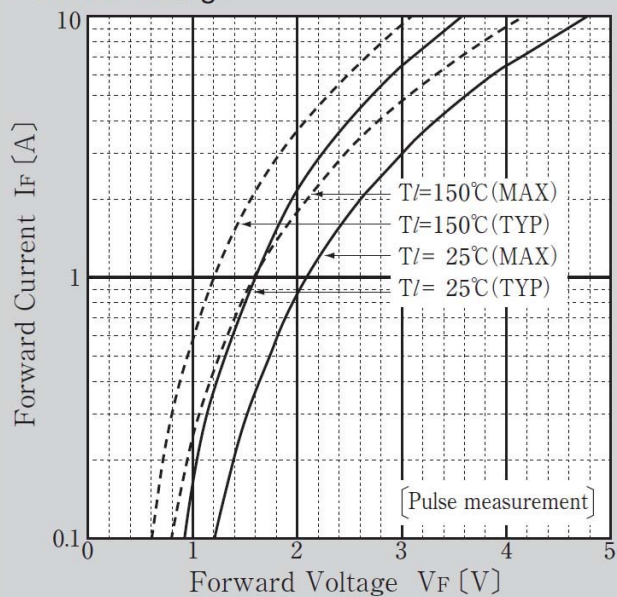
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	IF=1A, Pulse measurement			2.1	V
Reverse current	I_R	VR=1000V, Pulse measurement			10	μA
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR			75	ns
Total capacitance	Ct	f=1MHz, VR=10V		7.5		pF
Thermal resistance	Rth(j-l)	Junction to lead			23	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On alumina substrate ※			108	°C/W
Thermal resistance	Rth(j-a)	Junction to ambient, On glass-epoxy substrate ※			157	°C/W

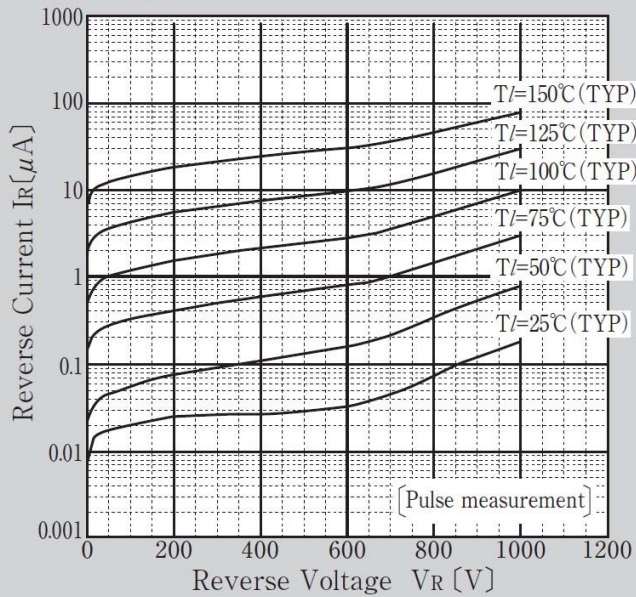
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

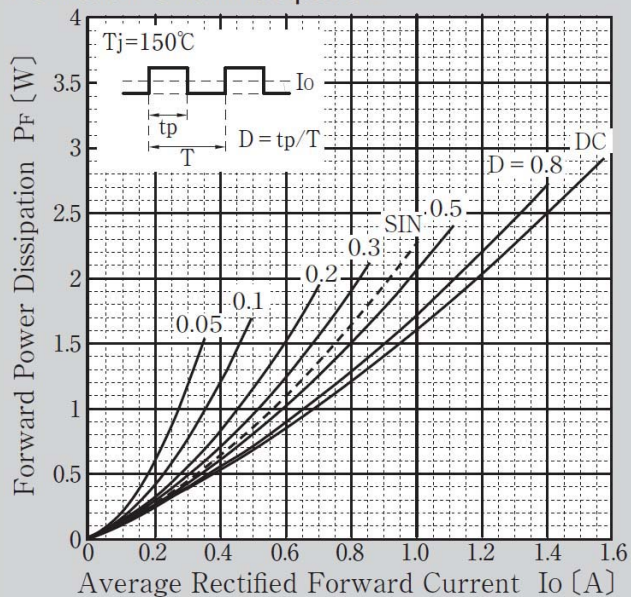
Forward Voltage



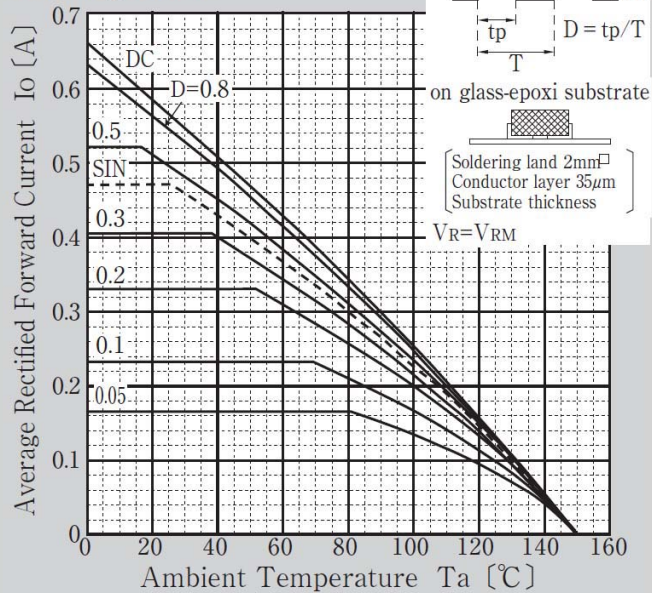
Reverse Current

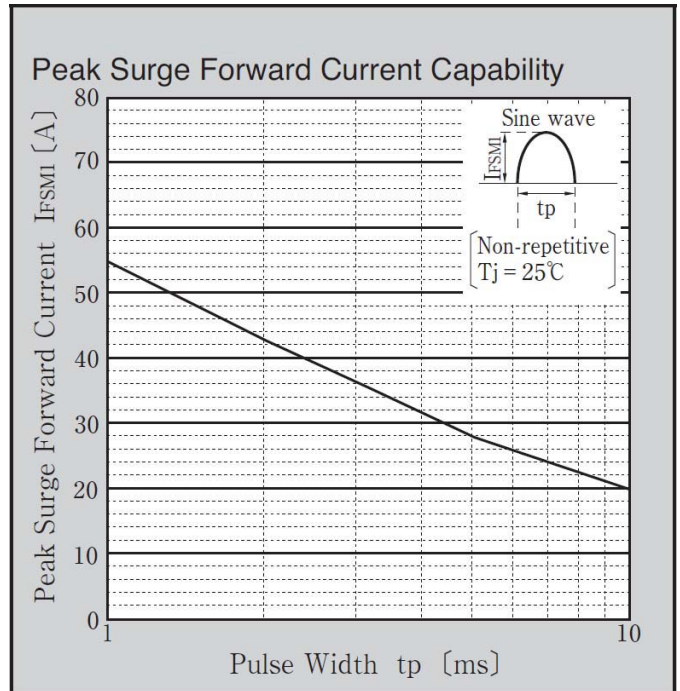
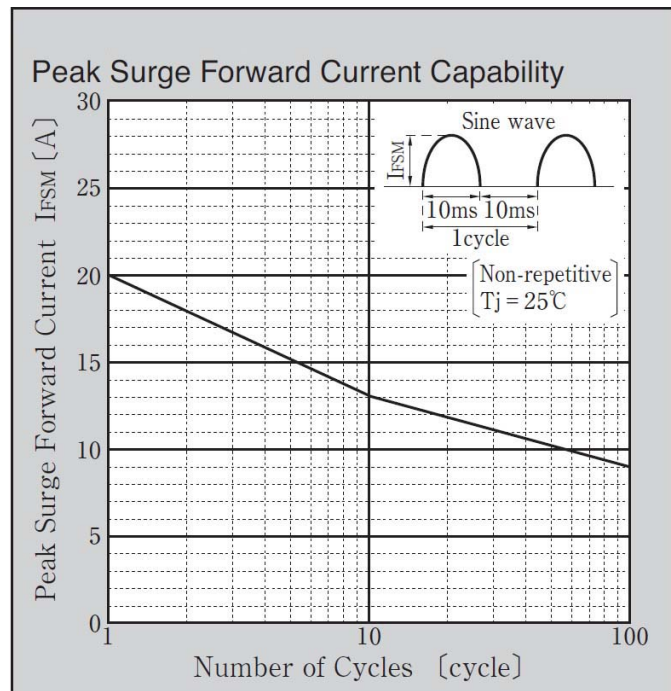
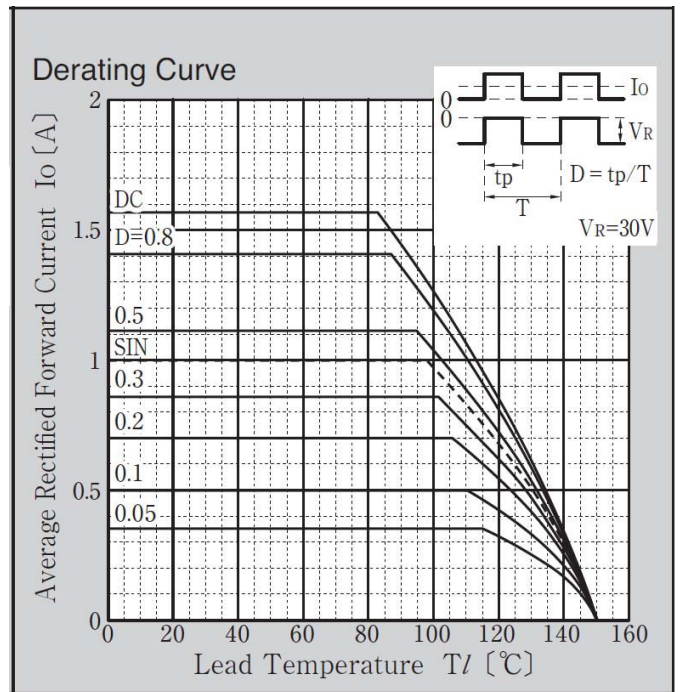
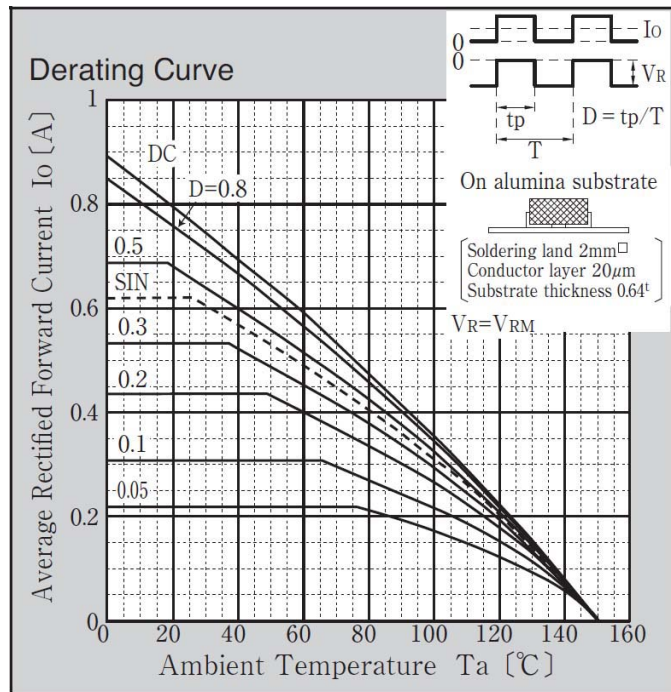


Forward Power Dissipation

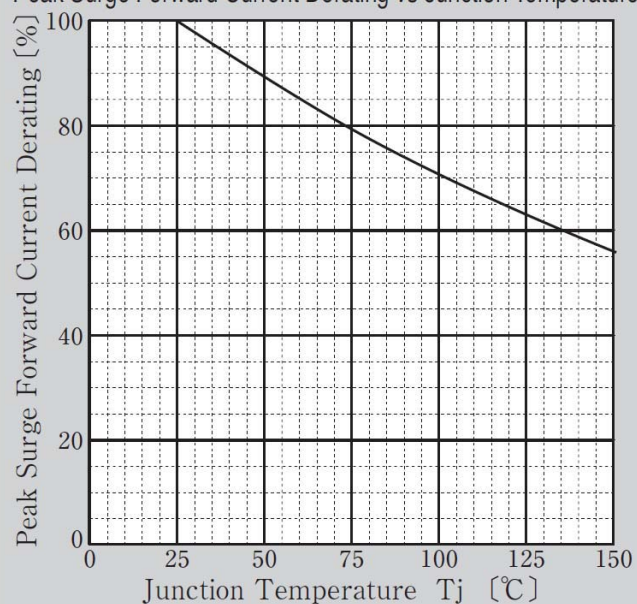


Derating Curve

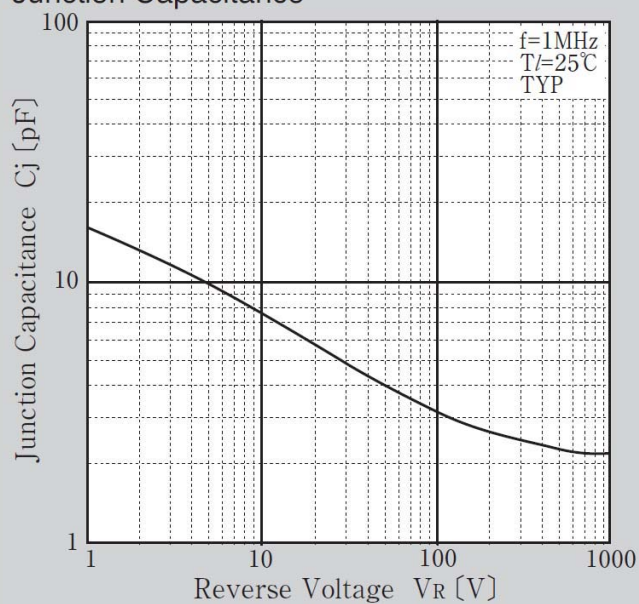




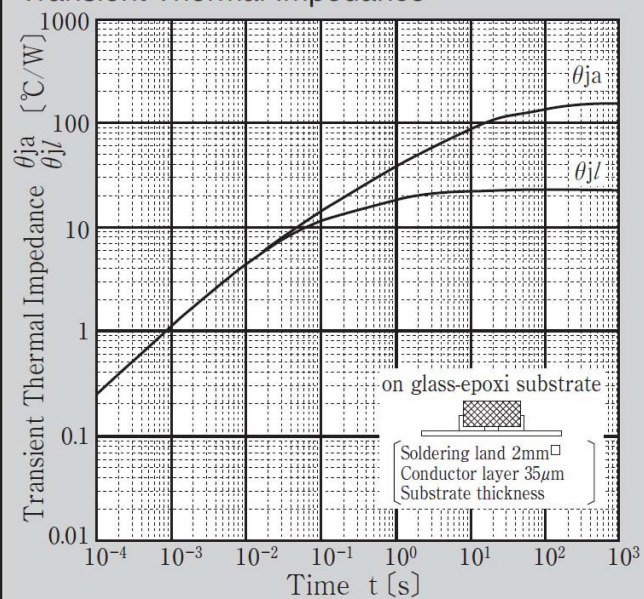
Peak Surge Forward Current Derating vs Junction Temperature



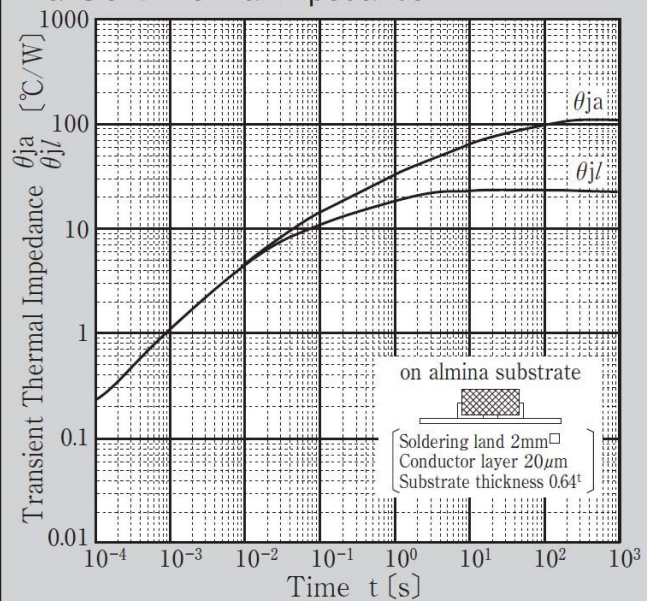
Junction Capacitance



Transient Thermal Impedance

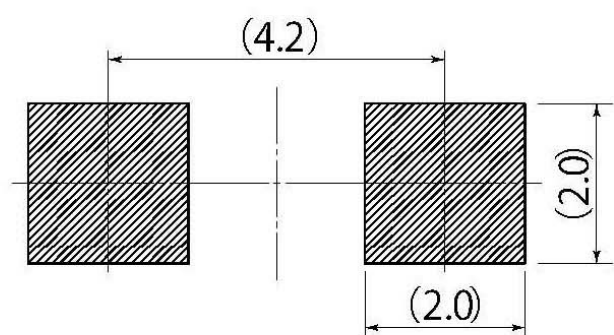
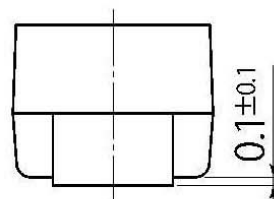
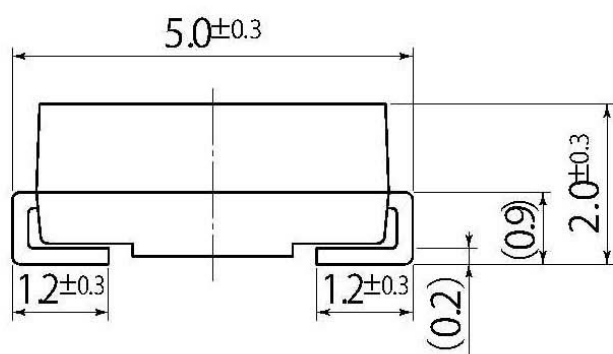
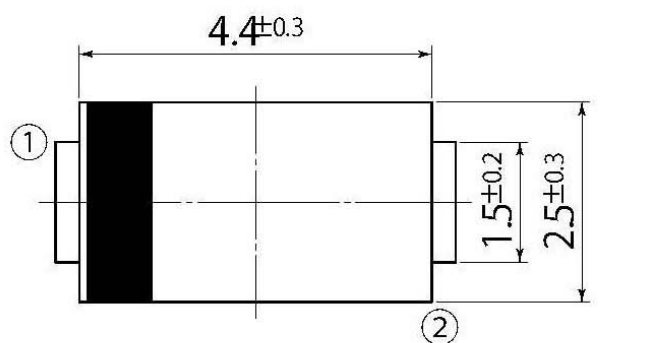


Transient Thermal Impedance



B3

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



Referential Soldering Pad

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

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