

D1FK100

Fast Recovery Diodes

1000V, 1A

Feature

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

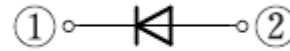
OUTLINE

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 temperature	T _{stg}		-55 to 150	°C
Junction temperature	T _j		-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

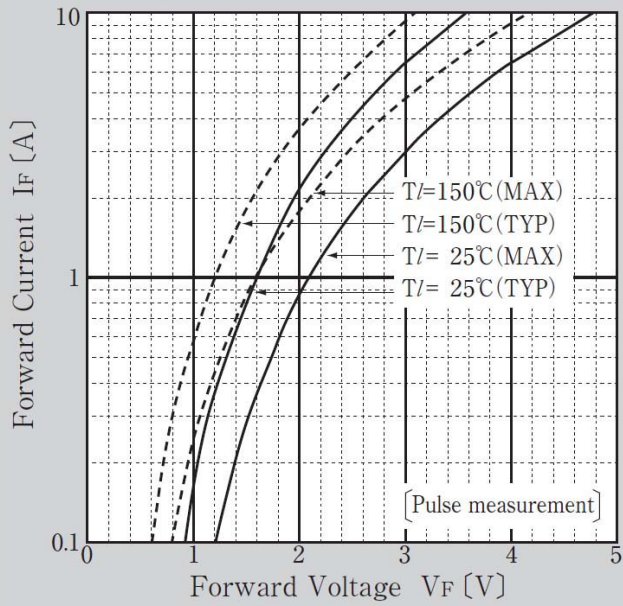
Electrical Characteristics (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	$I_F=1A$, Pulse measurement			2.1	V
Reverse current	I_R	$V_R=1000V$, Pulse measurement			10	μA
Reverse recovery time	t_{rr}	$I_F=0.5A$, $I_R=1.0A$, $0.25I_R$			75	ns
Total capacitance	C_t	$f=1MHz$, $V_R=10V$		7.5		pF
Thermal resistance	$R_{th(j-l)}$	Junction to lead			23	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On alumina substrate ※			108	$^{\circ}C/W$
Thermal resistance	$R_{th(j-a)}$	Junction to ambient, On glass-epoxy substrate ※			157	$^{\circ}C/W$

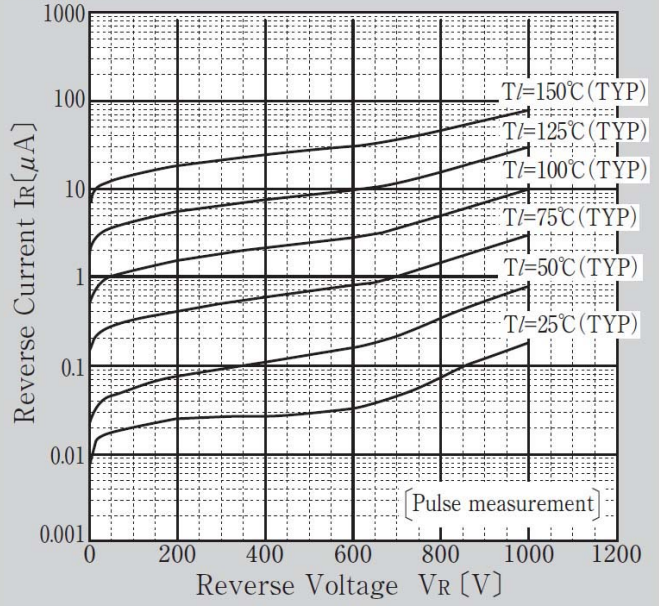
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

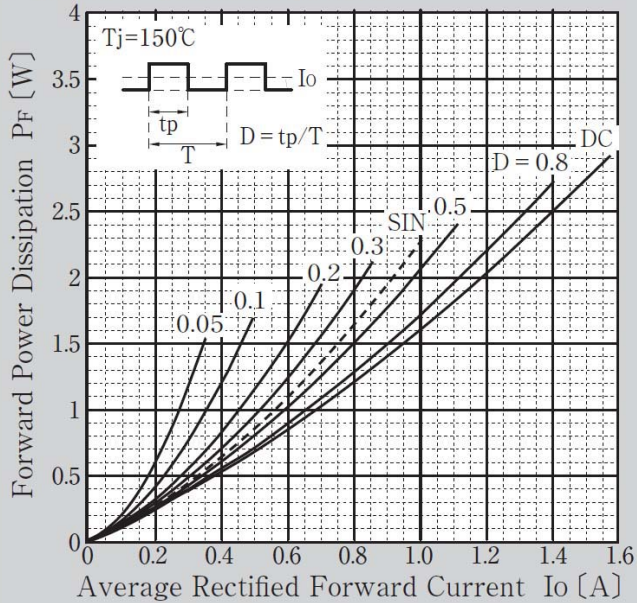
Forward Voltage



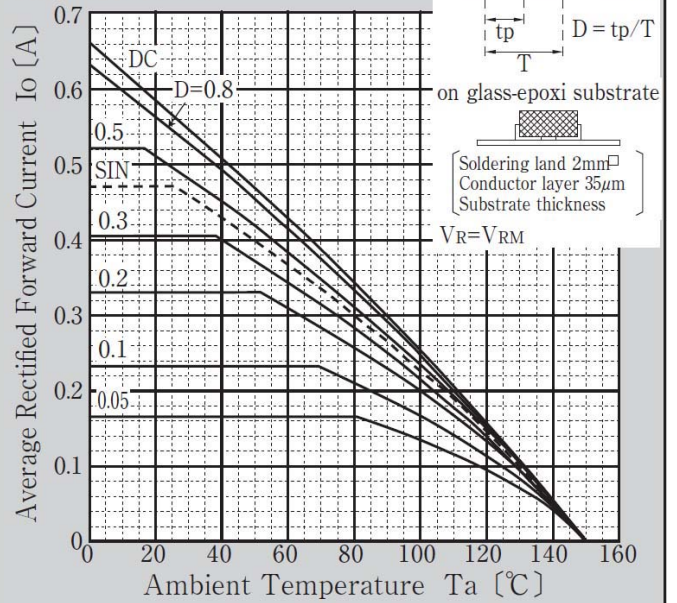
Reverse Current

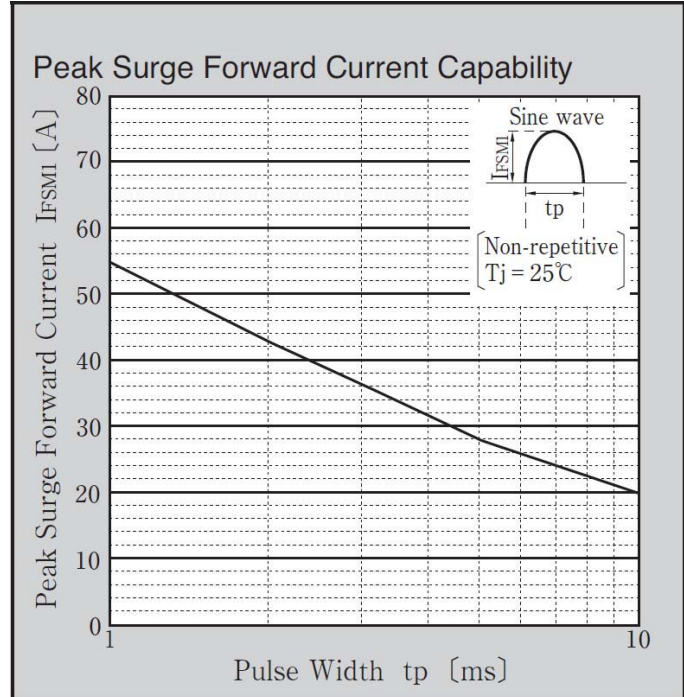
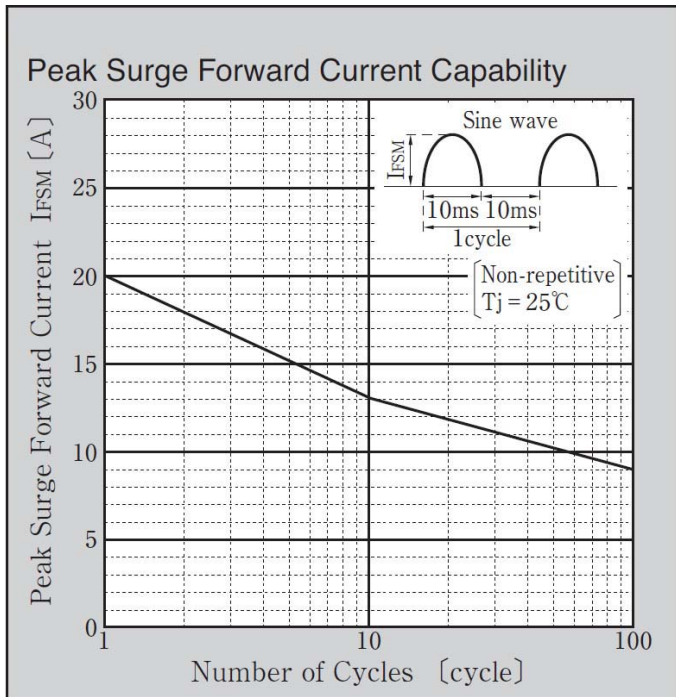
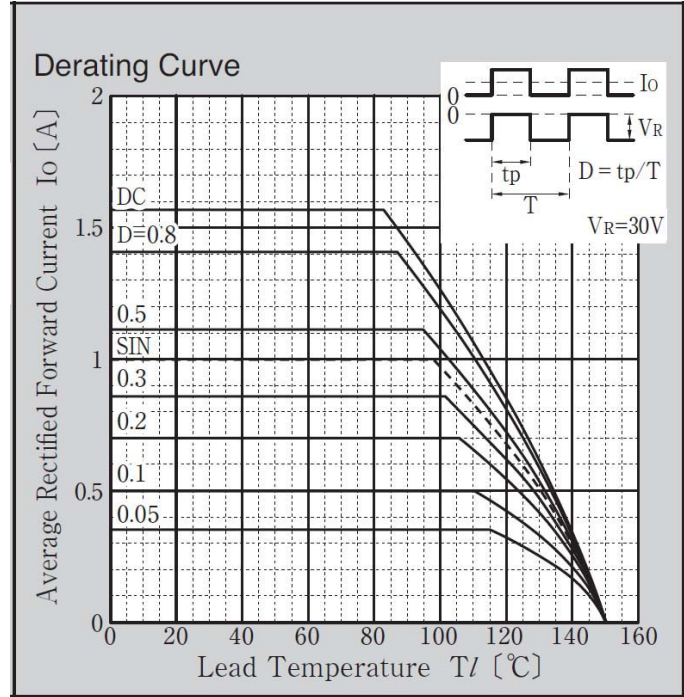
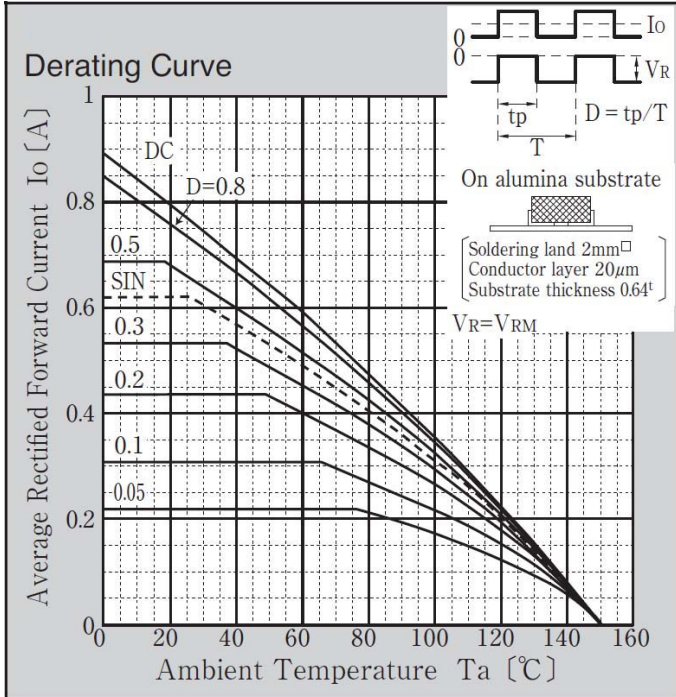


Forward Power Dissipation

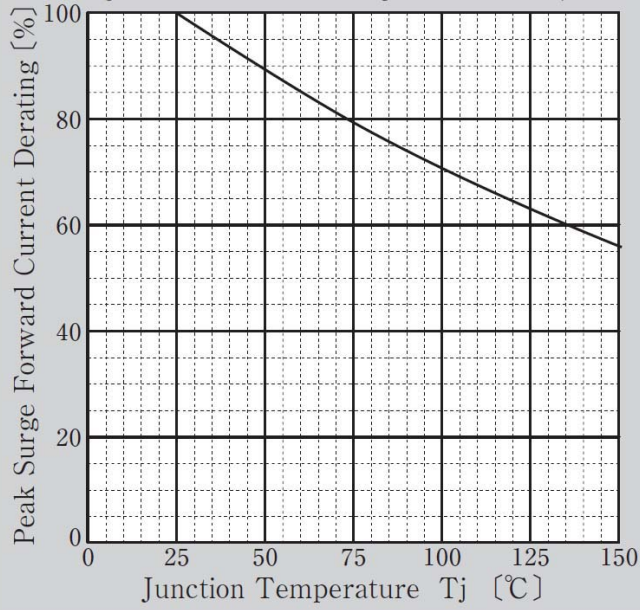


Derating Curve

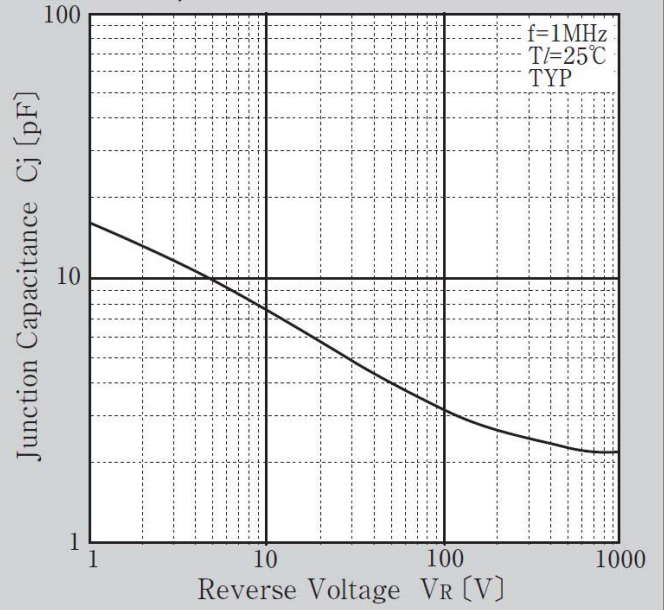




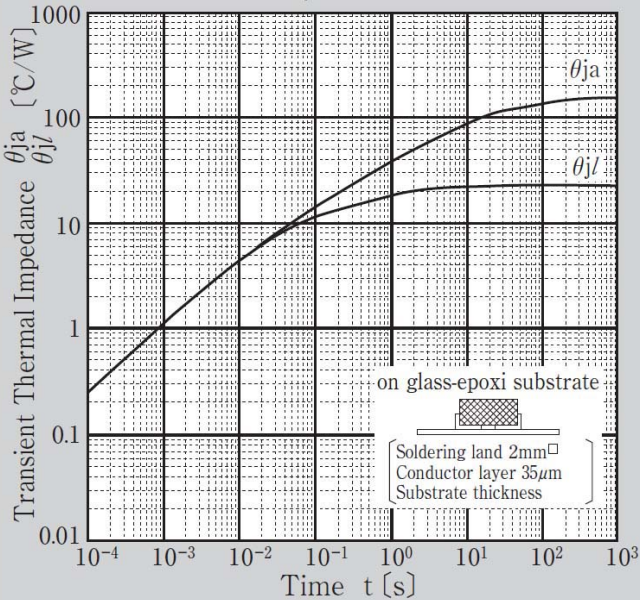
Peak Surge Forward Current Derating vs Junction Temperature



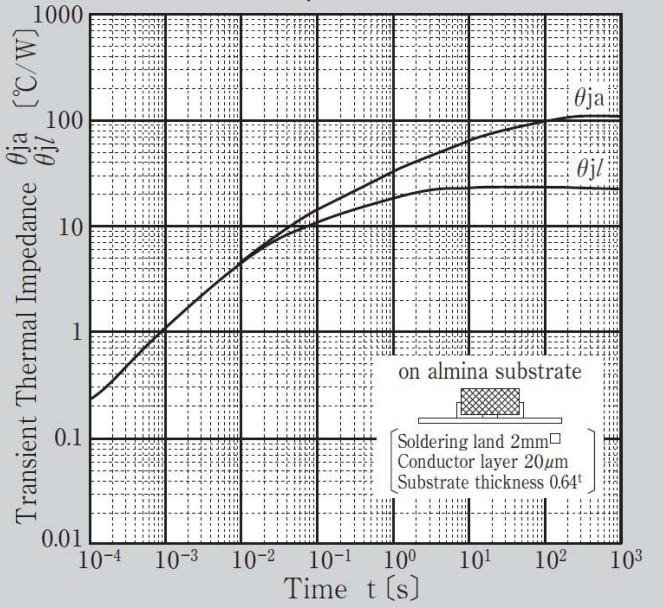
Junction Capacitance



Transient Thermal Impedance

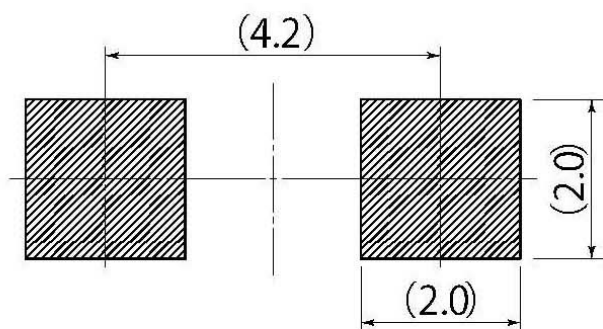
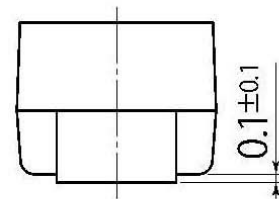
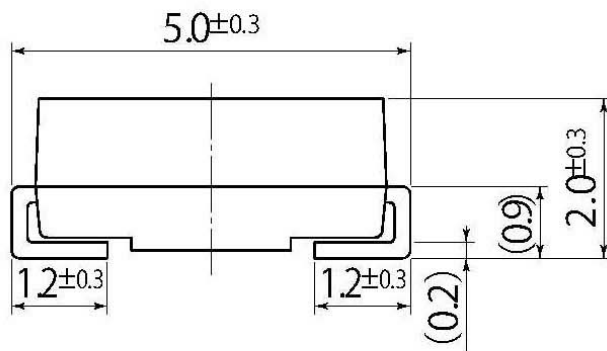
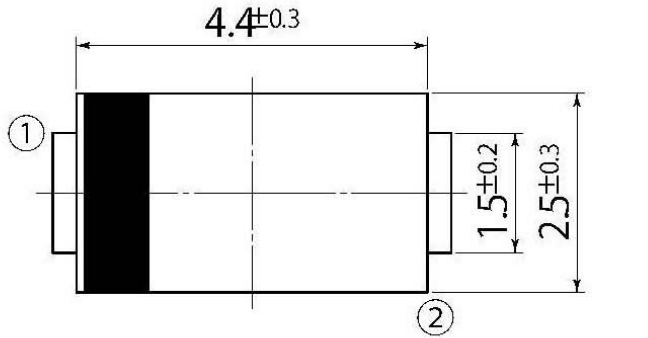


Transient Thermal Impedance



B3

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



Referential Soldering Pad

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