

D1FS6

Schottky Barrier Diodes

60V, 1.1A

Feature

- Small SMD
- High Recovery Speed
- Low V_F
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

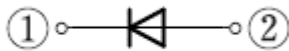
OUTLINE

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}		60	V
Repetitive peak surge reverse voltage	V _{RRSM}	Pulse width 0.5ms, duty=1/40	65	V
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On alumina substrate, Ta=49°C ※	1.1	A
Average forward current	I _{F(AV)}	50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=48°C ※	0.82	A
Surge forward current	I _{FSM}	50Hz sine wave, Non-repetitive, 1 cycle, Peak value, Tj=125°C	40	A
Repetitive peak surge reverse power	P _{RRSM}	Pulse width 10μs, Tj=25°C	60	W

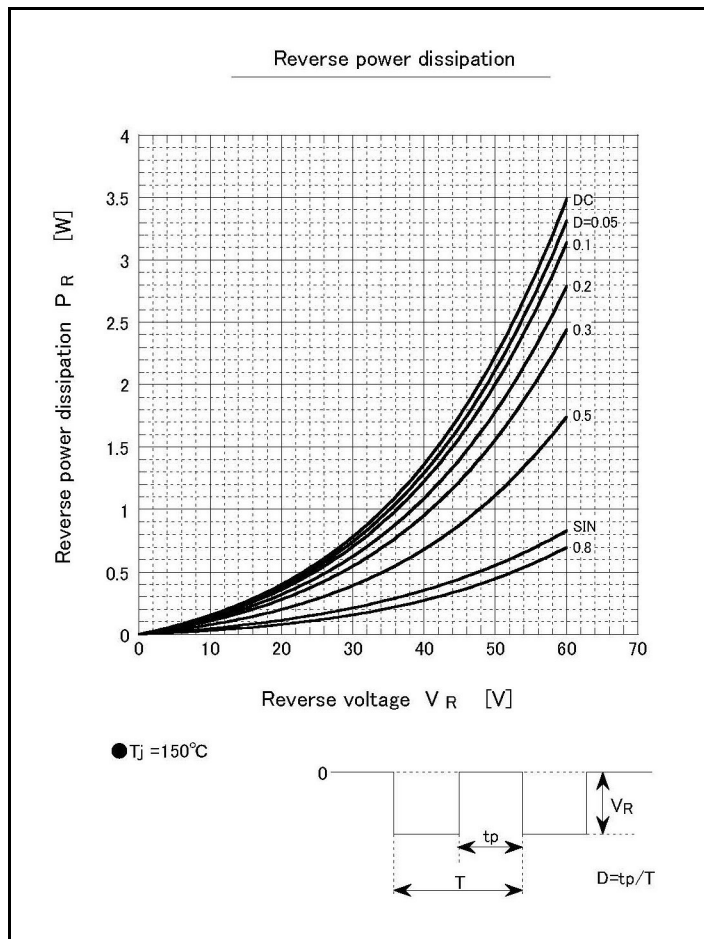
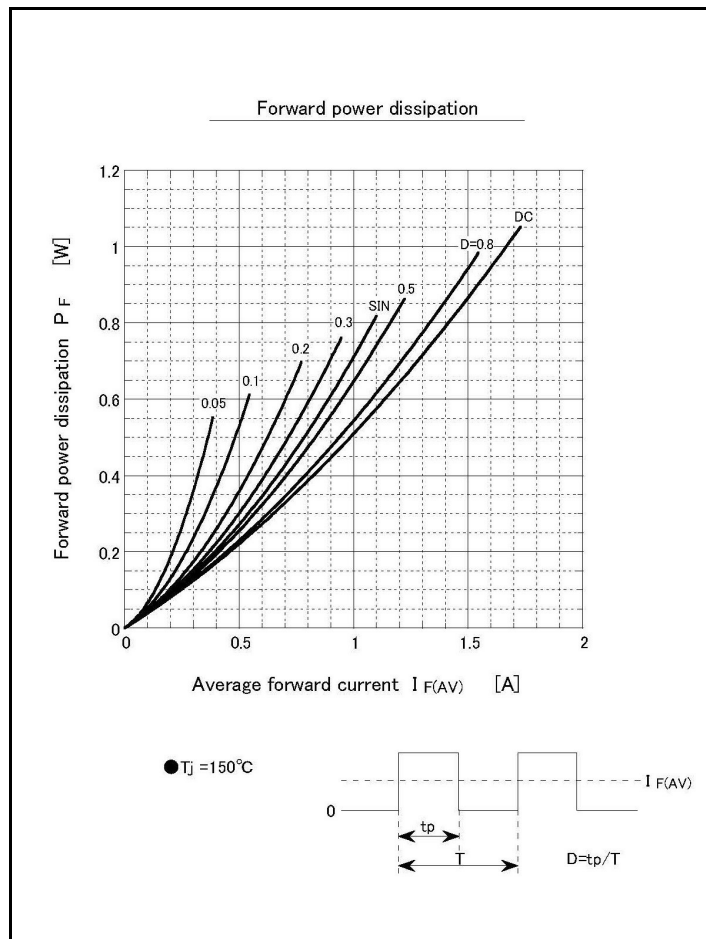
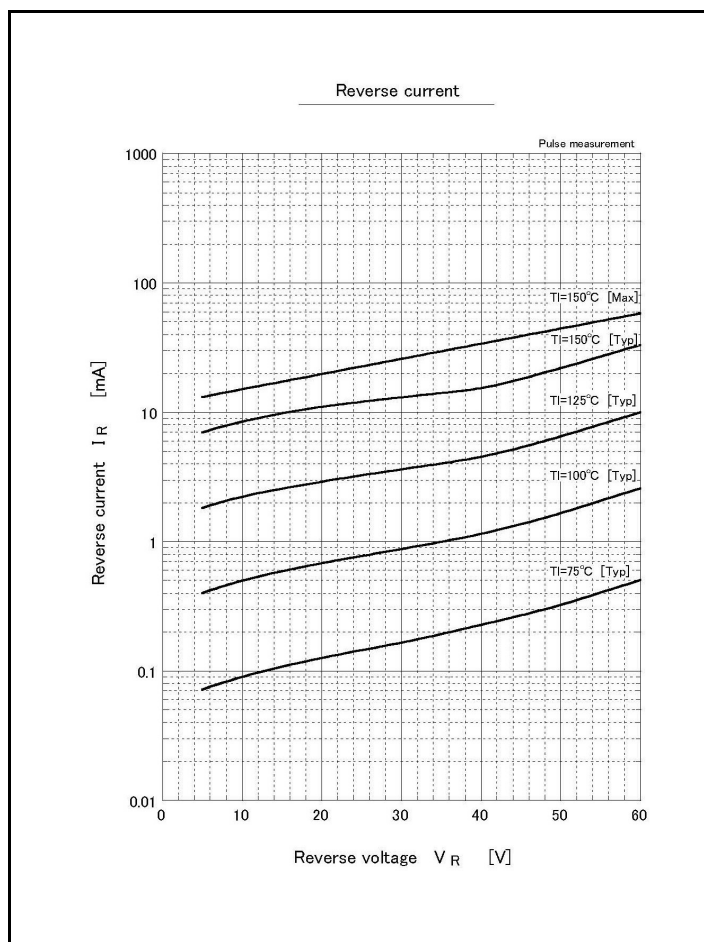
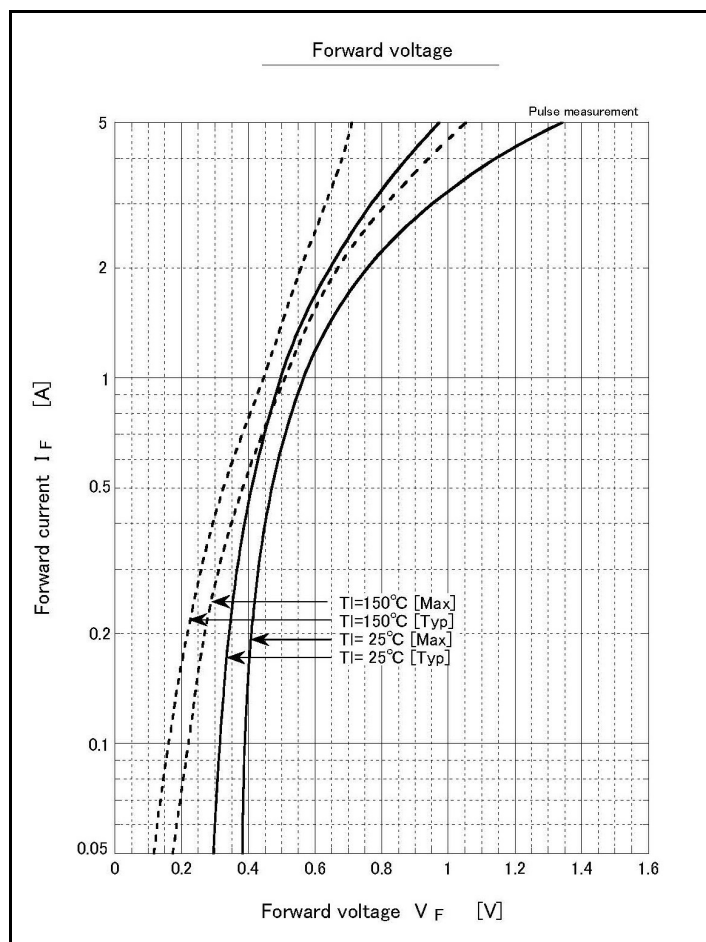
※ :See the original Specifications

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

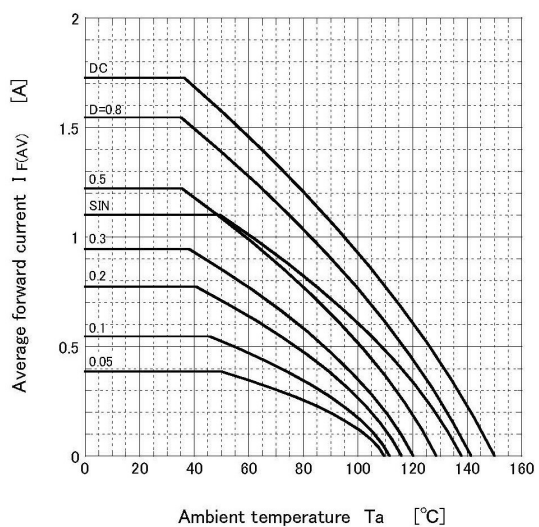
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	$I_F=1.1A$, Pulse measurement			0.58	V
Reverse current	I_R	$V_R=60V$, Pulse measurement			1	mA
Total capacitance	C_t	$f=1MHz$, $V_R=10V$		50		pF
Thermal resistance	$R_{th(j-l)}$	Junction to lead			23	°C/W
Thermal resistance	$R_{th(j-a)}$	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



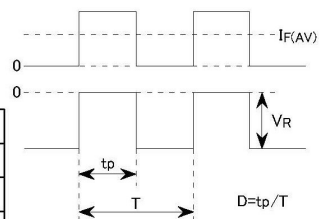
Derating curve



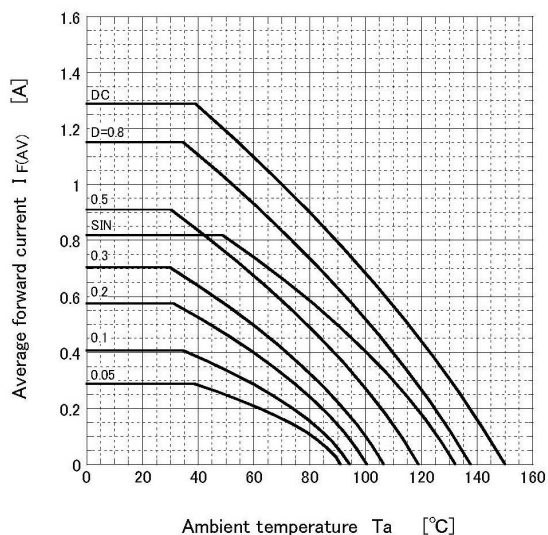
● $V_R = 20V$
R-load
Free in air

● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20 μ m
Pattern area	47.8mm ²



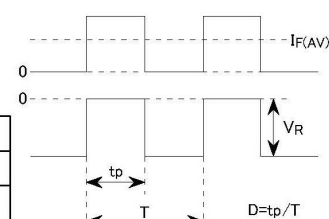
Derating curve



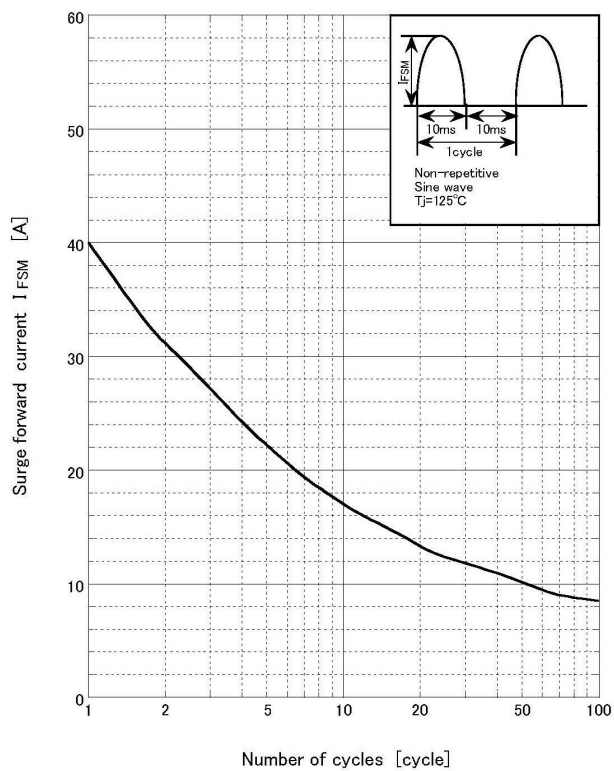
● $V_R = 20V$
R-load
Free in air

● Substrate detail

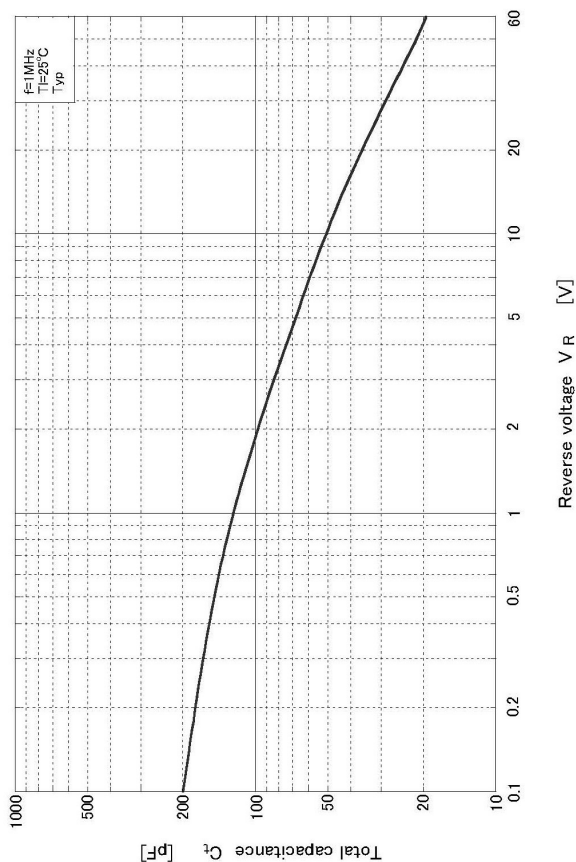
Type	Glass-epoxy
Size	1 inch ²
Thickness	1mm
Conductor thickness	35 μ m
Pattern area	47.8mm ²



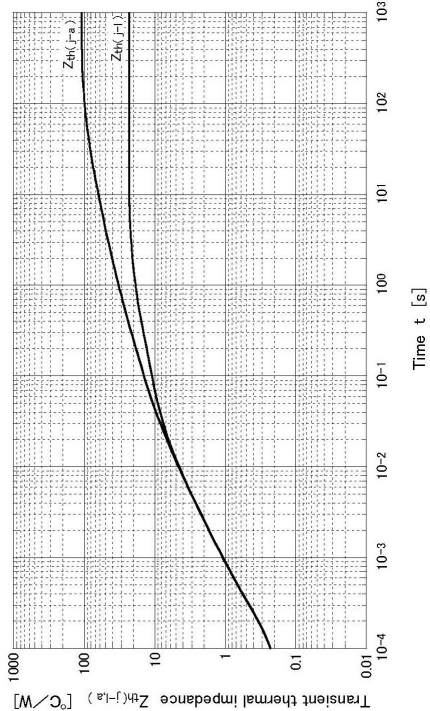
Surge forward current capability



Total capacitance



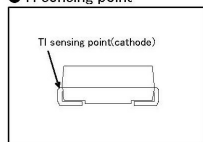
Transient thermal impedance



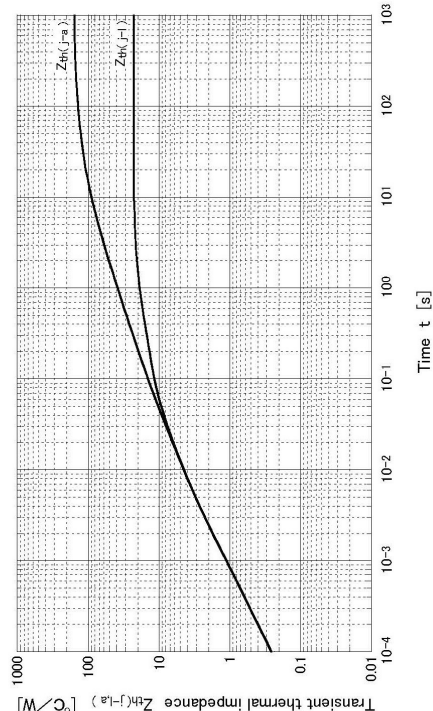
● Substrate detail

Type	Alumina
Size	1 inch ²
Thickness	0.64mm
Conductor thickness	20 μm
Pattern area	47.8mm ²

● TI sensing point



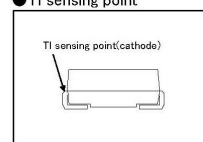
Transient thermal impedance



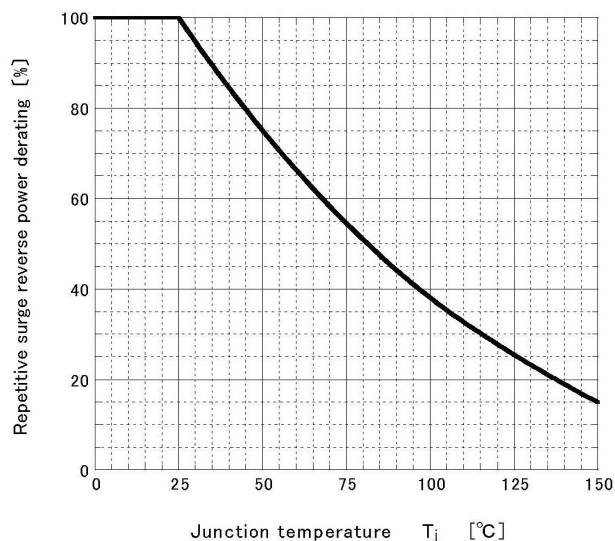
● Substrate detail

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

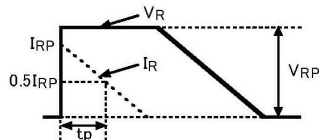
● TI sensing point



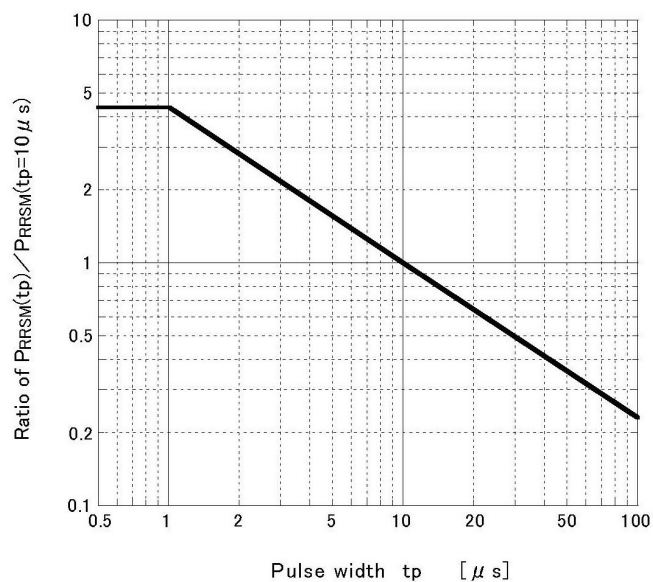
Repetitive surge reverse power derating
vs Junction temperature



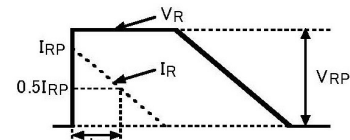
● $PRRSM = I_{RP} \times V_{RP}$



Repetitive surge reverse power capability

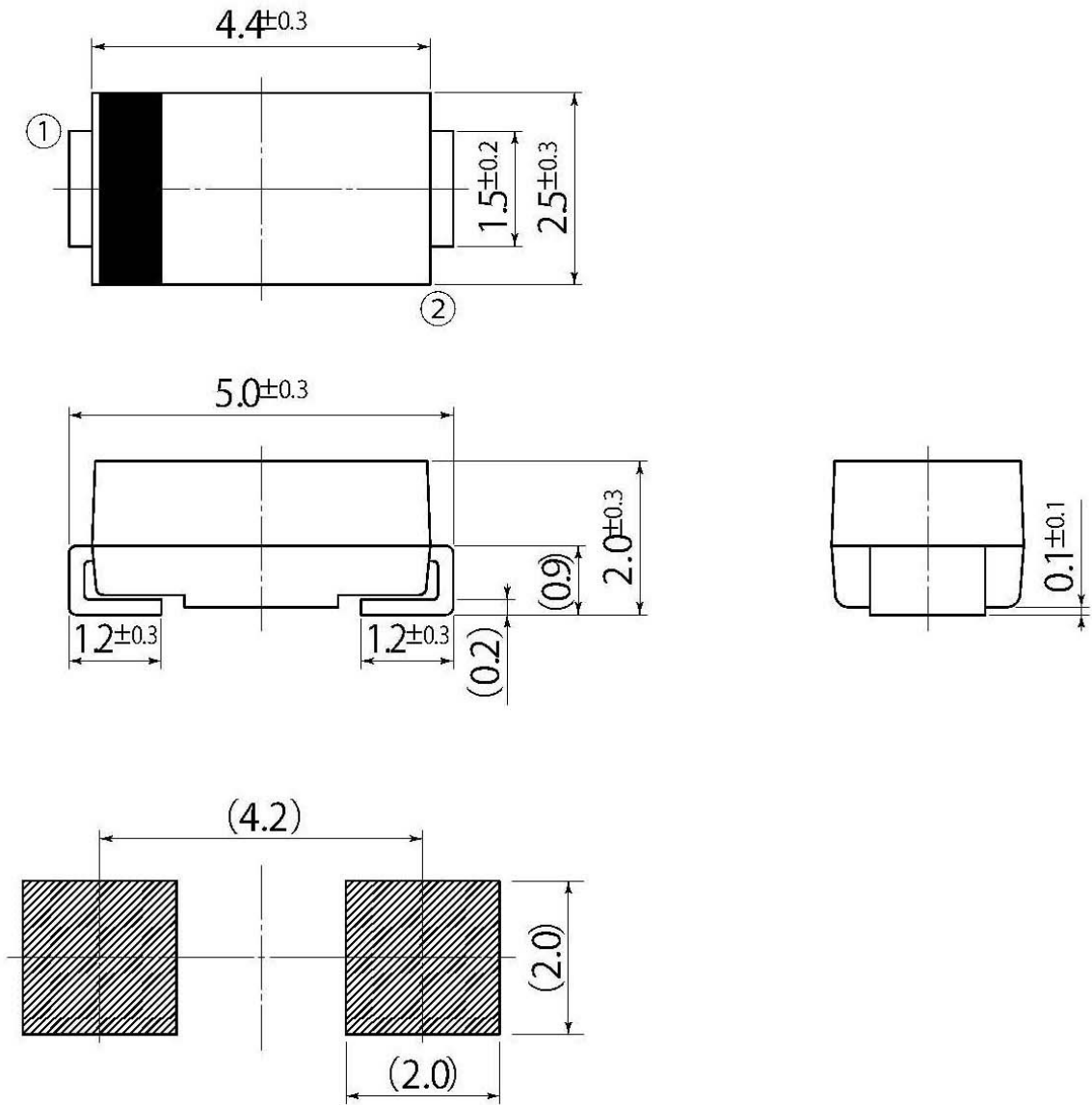


● $PRRSM = I_{RP} \times V_{RP}$



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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