Line-defec a e n of n able ral a e in cardiac i e

[1,*] A [2]

[1]Department of Applied Mathematics, University of Colorado, Boulder, Colorado 80309, USA

[2]Department of Physics and Center for Interdisciplinary Research on Complex Systems, Northeastern University, Boston, Massachusetts 02115, USA

20 2008; 6 2008; 30 2009

-2 , -1 . -2 , ,

Fig. 1.

a

E . [2]

, $= f'$, f',

$D^{n+1} = f(T\ D^n)$,

$(D)^{1/2}$, D

$(=0)$,

$a(r, t) = e^{t}(r,)$ E . [3]

$(r,)$.

$(r,) = R(r)()$.

$_n() =$

$L=2\pi r_i$ [20,25].

[17].

$a(r, jT)/a(r, 0)$ ... $Tj +$ ... F

$a \propto e^{i\omega jT}$, [20],

$$e^{i\omega T} = 1 - i/2\pi k = 1 - iwk \quad \pi^2 k^2 f'(I) + i/2\pi k, \quad (4)$$

$k = \nu/L + \omega T/L$

$\omega = c'(I)/(2c^2)$. A D C

$f(I)$ $c(I)$

. [20].

$2\pi/c$ $(D)^{1/2}$ [20]. F . 5

T,

r_i

C

[20].

. [20],

$r_e = 18$

$r_i = 0.72$

-2

. A

. F

-2

62.1 6-467.9 22.1 311.6 -31 7 /F2