

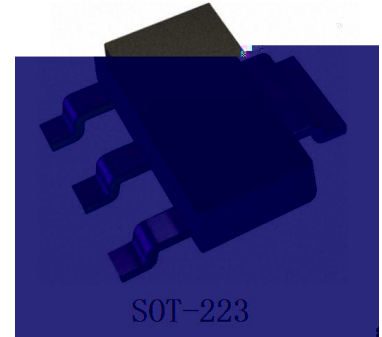
MCS2508L——

一、 概述

MCS2508L

SOT-223

DC 10KHz



MCS2508L

I N

MCS2508L

DRAI N

MOSFET -

I N

二、 特性

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-
-
- (ESD)
-
- MOSFET
- AEC-Q100
- RoHs

三、 应用

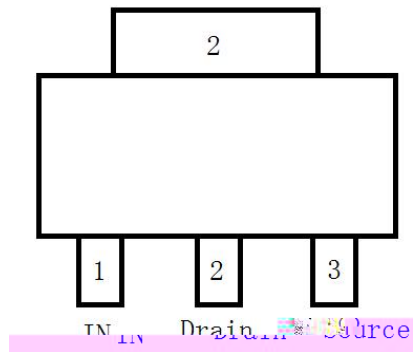
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-
-

- 3.1

V_D		42	V
$V_{IN(max)}$		7	V
RDS(ON, amb. typ)	($T_j = 25$ $V_{in} = 5V$)	0.28	
RDS(ON, hot. max)	($T_j = 150$ $V_{in} = 5V$)	0.95	
I_D		1.2	A

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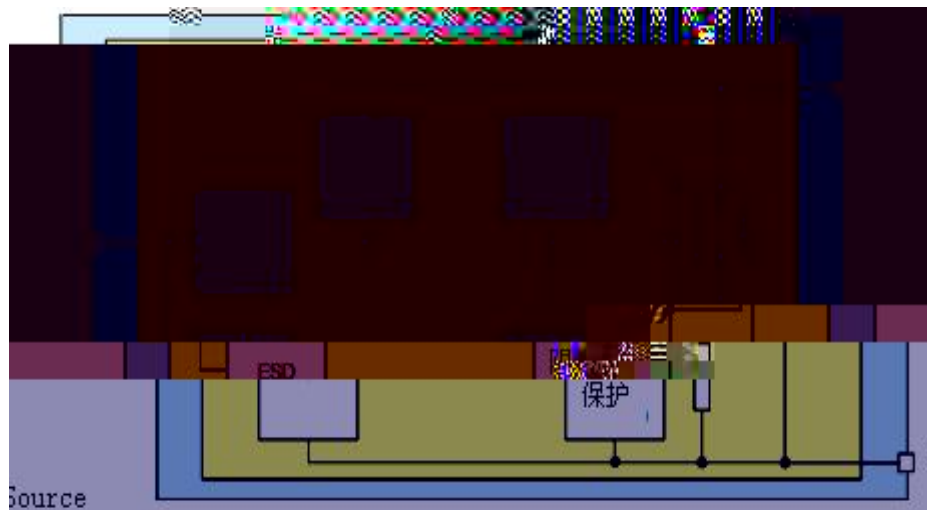
四、管脚说明



1	IN	/
2	Drain	/
3	Source	

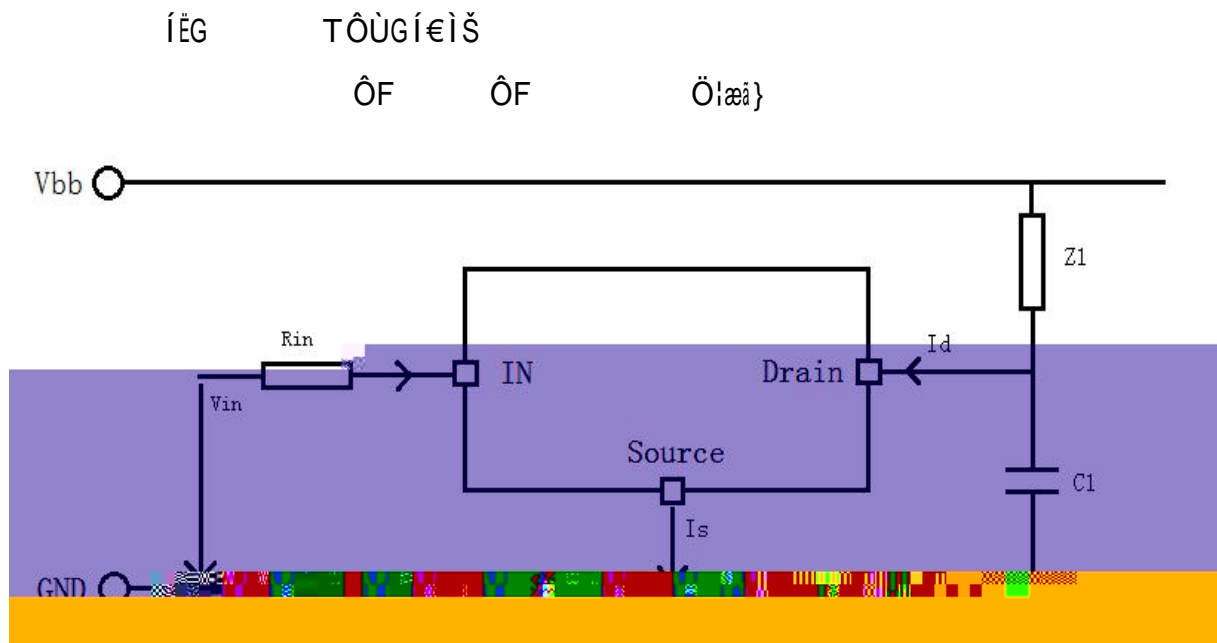
五、内部逻辑框图与典型应用电路

1. T0UGIŠ 内部逻辑框图



5-1 MCS2508L

ÍÈÇ、典型应用电路



5-2 MCS2508L

六、 极限参数

6.1

$$T_j = -40 \quad +150$$

	V_D	-	42	V	$V_{IN}=0V,$ $I_D=10mA$
	V_{IN}	-0.2	7	V	-
	I_{IN}	-20	20	mA	$V_{IN}<-0.2V$ $V_{IN}>7V$
	I_D	-	2	A	$T_j=25$
	P_{tot}	-	0.7	W	$T_a = 25$

	Tj	- 40	+150		-
	Tstg	- 40	+150		-
ESD					
	V _{ESD}	- 4	4	kV	R = 1.5k C = 100pF Tj = 25

6.2

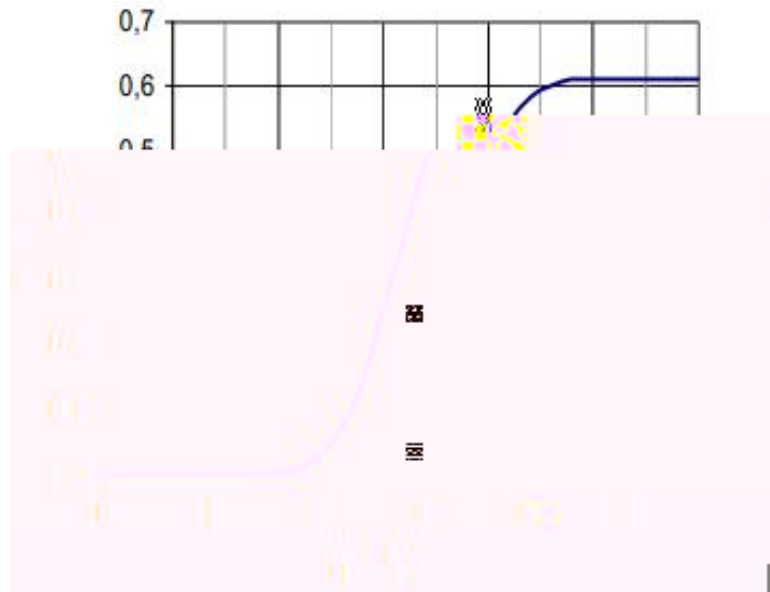
PN	R _{thJC}	-		18	/W	
PN	R _{thJA}	-		70	/W	

七、 模块描述及特性

ïÈF

ĪĒĠ, 传输特性

ĪĒĠ



7-2

I_D f(V_{IN}) $V_D=12V$ $T_{Jstart}=25$

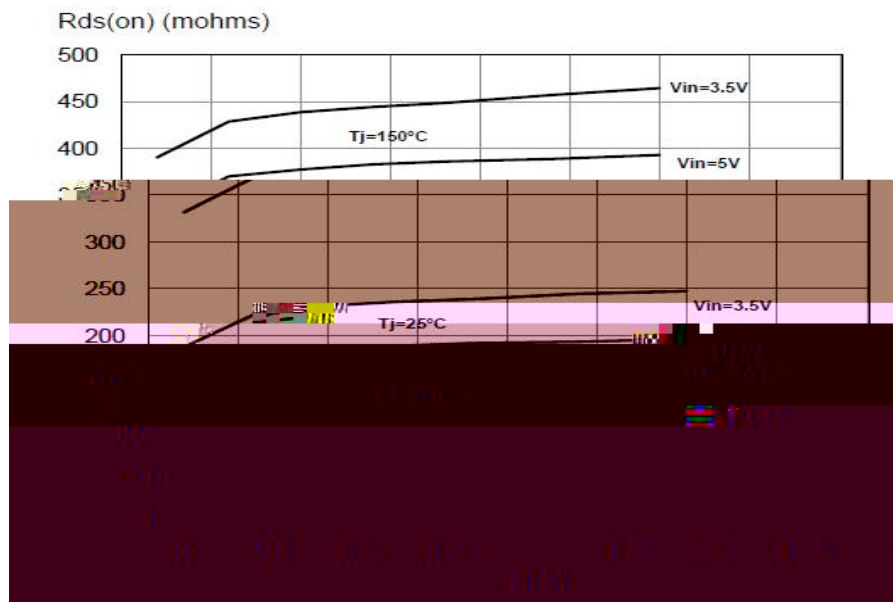
I_{don}

ĪĒĤ, 导通电阻

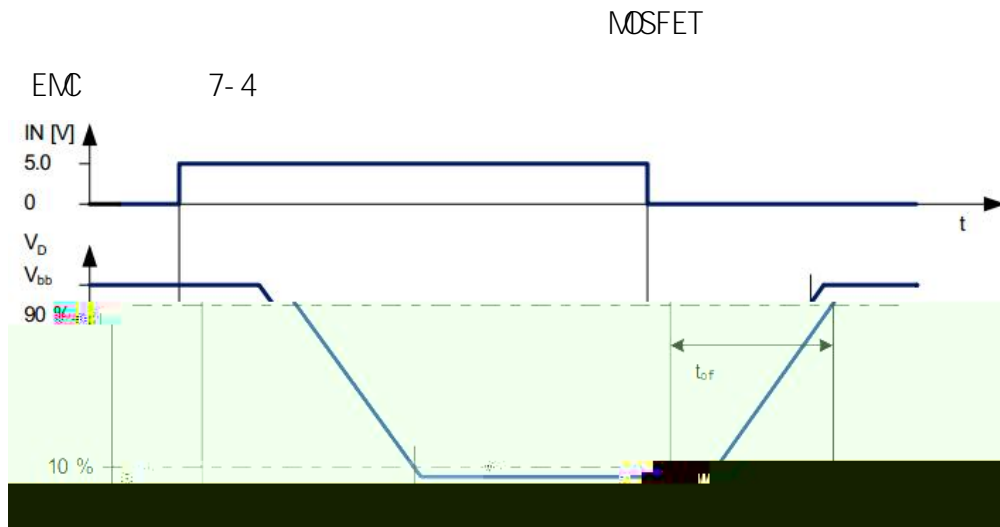
V_R

ĪĒĤ

$\ddot{U}_{\ddot{O}\ddot{U}\ddot{C}}[\ddot{Y}]\ddot{D}$



输出时序



电气特性

7.1

$T_j = -40 \quad +150$ ()

7.1

	I_{INom}	-	60	90	uA	$V_D=0V$ $V_{IN}=5V$
	I_{INmin}	-	330	600	uA	$V_{IN}=7V$ $T_J=150$
	V_{INTH}	1.3	1.7	2.2	V	$V_D=V_{IN}$ $I_D=50uA$ $T_J=25$
		0.8	-	-	V	$V_D=V_{IN}$ $I_D=50uA$ $T_J=150$

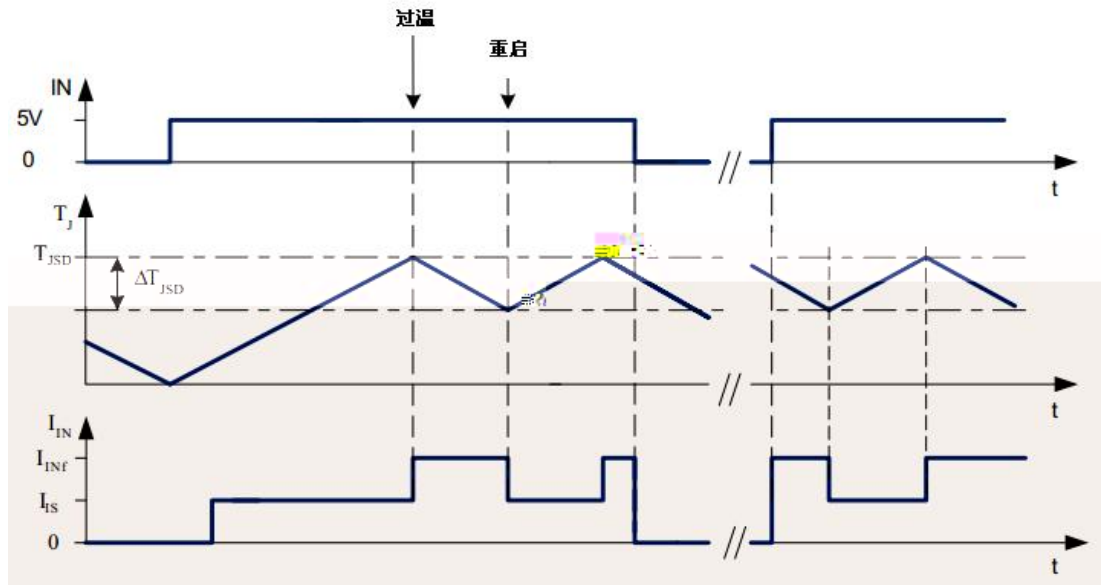
	$R_{DS(on)}$	-	0.28	-		$T_j = 25$ $V_{IN} = 5V$ $I_D = 200mA$
		-	0.9	1.5		$T_j = 150$ $V_{IN} = 5V$ $I_D = 200mA$
	I_{Dnom}	-	-	1.2	A	$T_A = 25$ $V_{IN} = 5V$
	I_{DSS}	-	-	2	μA	$V_{DS} = 13.5V$ $V_{IN} = 0V$ $T_j = 150$
		-	2.5	6	μA	$V_{DS} = 32V$ $V_{IN} = 0V$ $T_j = -40 \sim 85$
		-	4	7	μA	$V_{DS} = 32V$ $V_{IN} = 0V$ $T_j = 150$
: $V_{bb} = 12V$ $R_t = 82$						
	t_{on}	-	30	60	μs	$V_{IN} = 7V$ $t_{0.90\% D}$
	t_{off}	-	40	80	μs	$V_{IN} = 0V$ $t_{0.10\% D}$
	V_D	-	-0.6	-1	V	$I_D = -0.2mA$ $V_{IN} = 0V$

八、 保护功能

热保护

MOSFET

MCS2508L



8-1

过温、过压保护

- V_D

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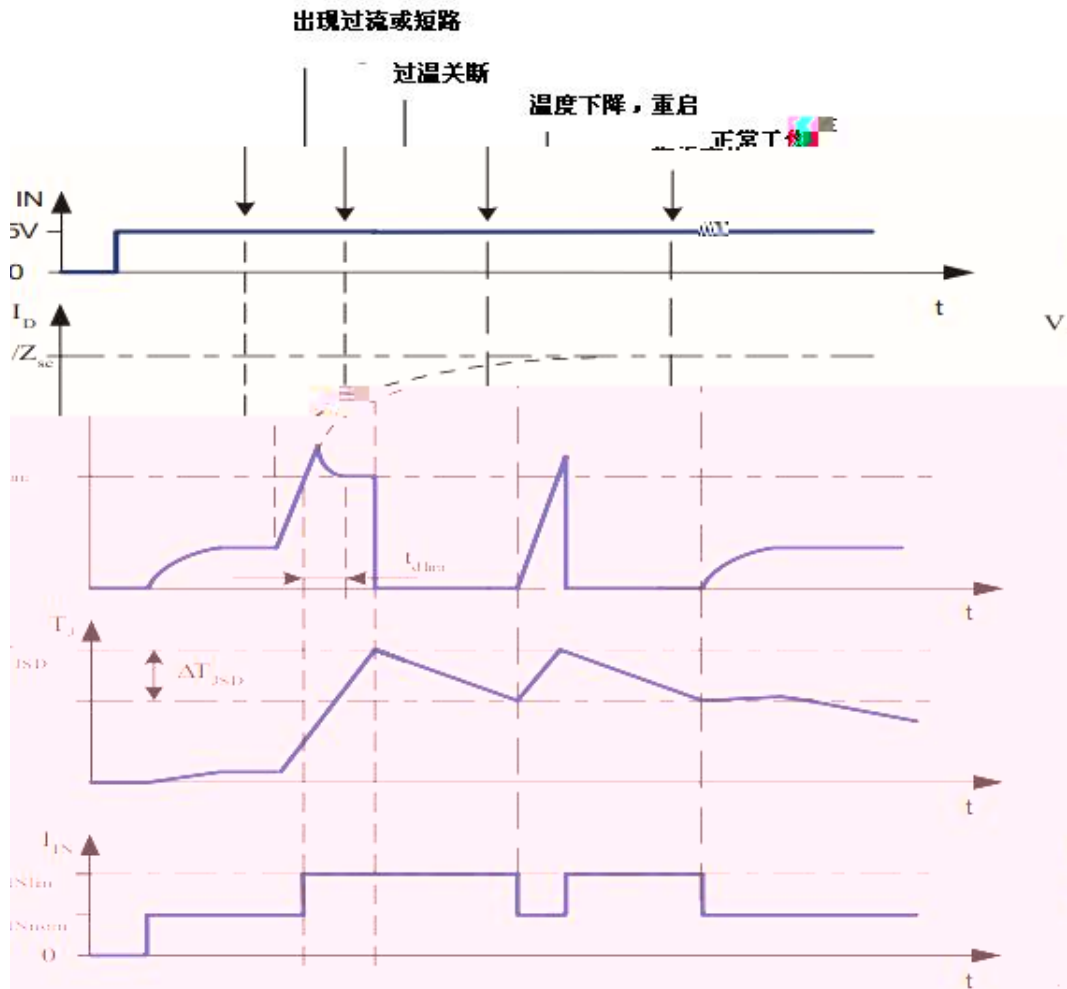
短路保护

I_{lim}

8-2

I_{Nhom} t_{dlim}

I_{lim}



8-2 MCS2508L

電特性

8.1

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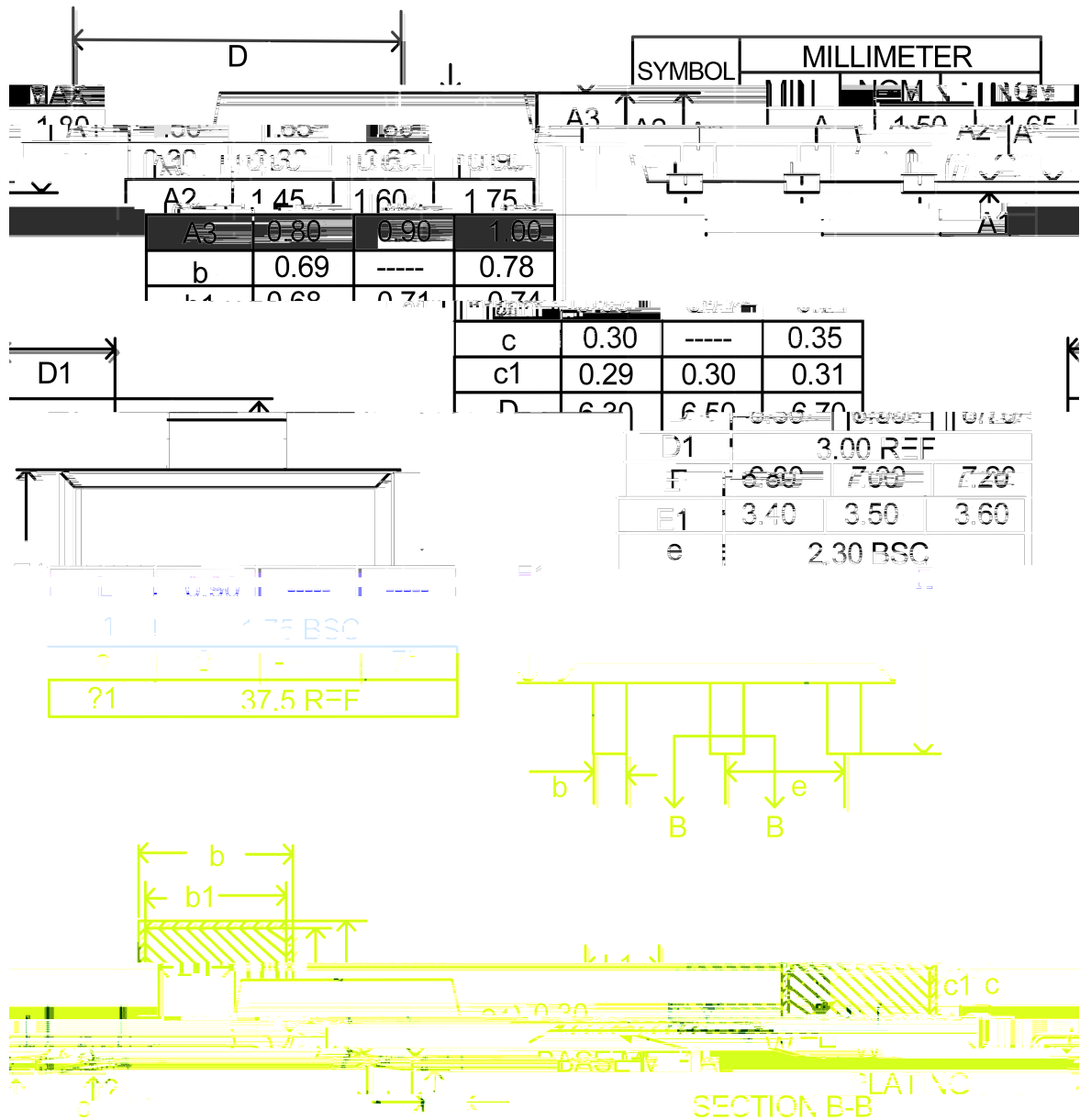
8.1

$T_j = -40 \quad +150$ ()

	T_{JSD}	150	165	-		-
	T_{JSD}	-	20	-		
	V_{Clamp}	40	-	52	V	$V_{IN} = 0V \quad 7V$ $I_D = 10mA$
	I_{lim}	1.3	1.8	2.4	A	$V_{IN} = 0V \quad 7V$ $V_{DS} = 12V$ $t_{measure} = 4 * t_{dlim}$ $T_j = 25$
		0.6	-	-		$T_j = 150$
		-	-	2.8		$T_j = -40$
	t_{dlim}	-	-	50	us	

九、封装尺寸

SOT-223



十、 订购信息

TÔÙGÍ€ÌŠ	ÙUVĚGGH	TÔÙGÍ€ÌŠ	GÍ€€]•D