

# 2SK3289

Silicon N Channel MOS FET  
High Speed Switching

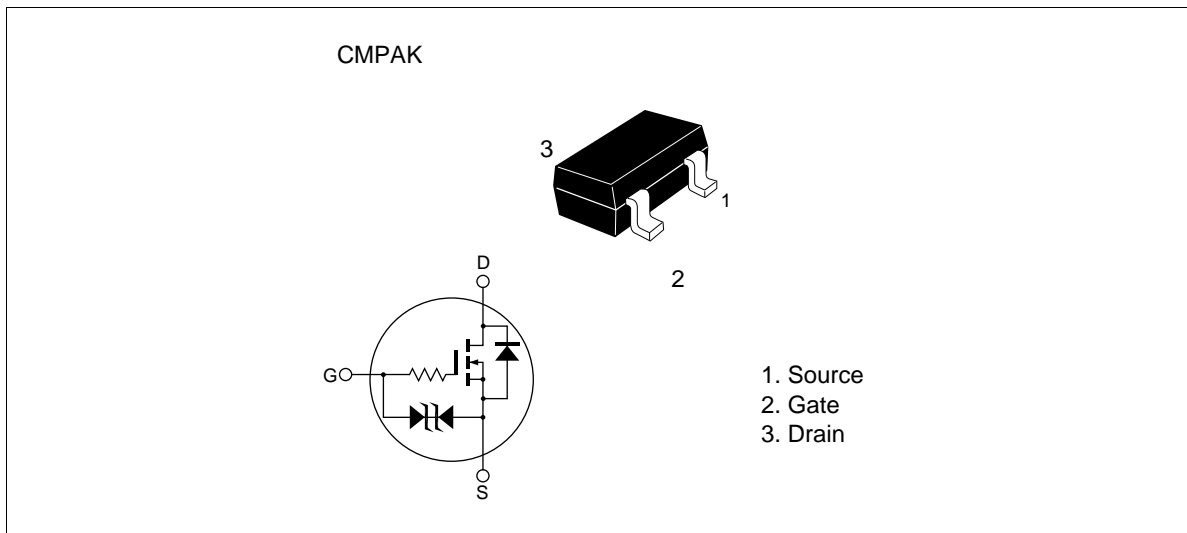
# HITACHI

ADE-208-743C (Z)  
4th.Edition.  
June 1999

## Features

- Low on-resistance  
 $R_{DS} = 1.26 \Omega$  typ. ( $V_{GS} = 10 \text{ V}$ ,  $I_D = 150 \text{ mA}$ )  
 $R_{DS} = 2.8 \Omega$  typ. ( $V_{GS} = 4 \text{ V}$ ,  $I_D = 50 \text{ mA}$ )
- 4 V gate drive device.
- Small package (CMPAK)

## Outline



## 2SK3289

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	$V_{DSS}$	30	V
Gate to source voltage	$V_{GSS}$	$\pm 20$	V
Drain current	$I_D$	300	mA
Drain peak current	$I_{D(pulse)}$ <sup>Note1</sup>	1.2	A
Body-drain diode reverse drain current	$I_{DR}$	300	mA
Channel dissipation	$P_{ch}$ <sup>Note 2</sup>	300	mW
Channel temperature	$T_{ch}$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

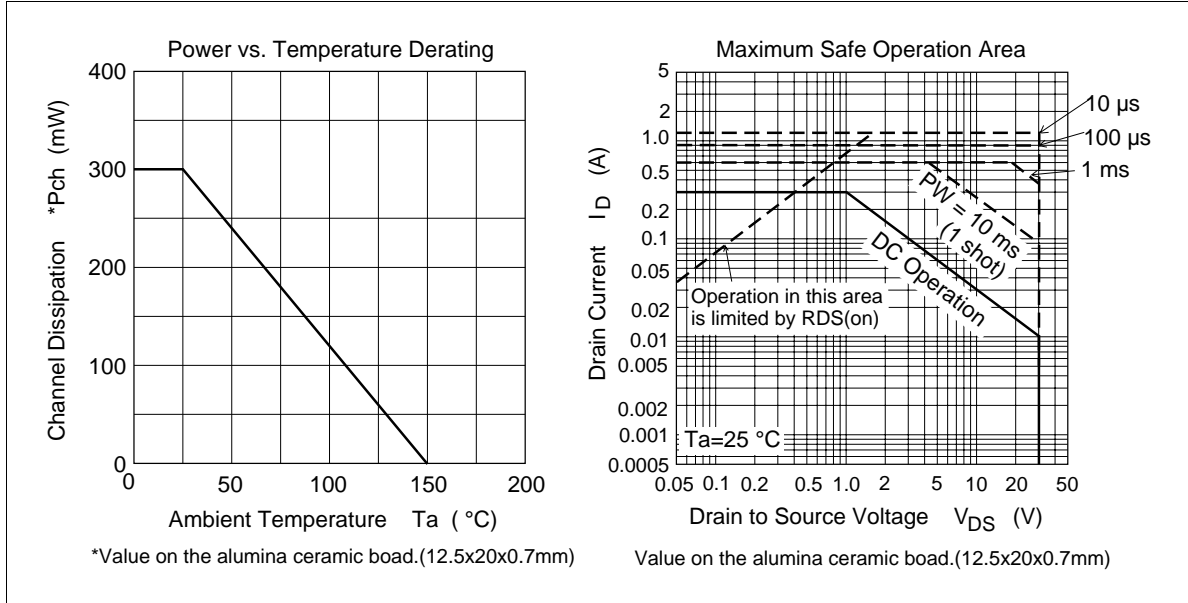
Note: 1.  $PW \leq 10 \mu s$ , duty cycle  $\leq 1\%$   
 2. Value on the alumina ceramic board (12.5 x 20 x 0.7 mm)

### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	30	—	—	V	$I_D = 100 \mu A, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	$\pm 20$	—	—	V	$I_G = \pm 100 \mu A, V_{DS} = 0$
Gate to source leak current	$I_{GSS}$	—	—	$\pm 5$	$\mu A$	$V_{GS} = \pm 16 V, V_{DS} = 0$
Zero gate voltage drain current	$I_{DSS}$	—	—	1	$\mu A$	$V_{DS} = 30 V, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	1.3	—	2.3	V	$I_D = 10 \mu A, V_{DS} = 5 V$
Static drain to source on state resistance	$R_{DS(on)}$	—	1.26	3.44	$\Omega$	$I_D = 150 mA, V_{GS} = 10 V$ <sup>Note 3</sup>
	$R_{DS(on)}$	—	2.8	3.44	$\Omega$	$I_D = 50 mA, V_{GS} = 4 V$ <sup>Note 3</sup>
Forward transfer admittance	$ y_{fs} $	145	220	—	mS	$I_D = 150 mA, V_{DS} = 10 V$ <sup>Note 3</sup>
Input capacitance	$C_{iss}$	—	6	—	pF	$V_{DS} = 10 V$
Output capacitance	$C_{oss}$	—	18	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	$C_{rss}$	—	2	—	pF	$f = 1 MHz$
Turn-on delay time	$t_{d(on)}$	—	200	—	ns	$I_D = 150 mA, V_{GS} = 10 V$
Rise time	$t_r$	—	600	—	ns	$R_L = 66.6 \Omega$
Turn-off delay time	$t_{d(off)}$	—	1100	—	ns	
Fall time	$t_f$	—	1100	—	ns	

Note: 3. Pulse test  
 4. Marking is AN  
 See characteristics curves of 2SK3287

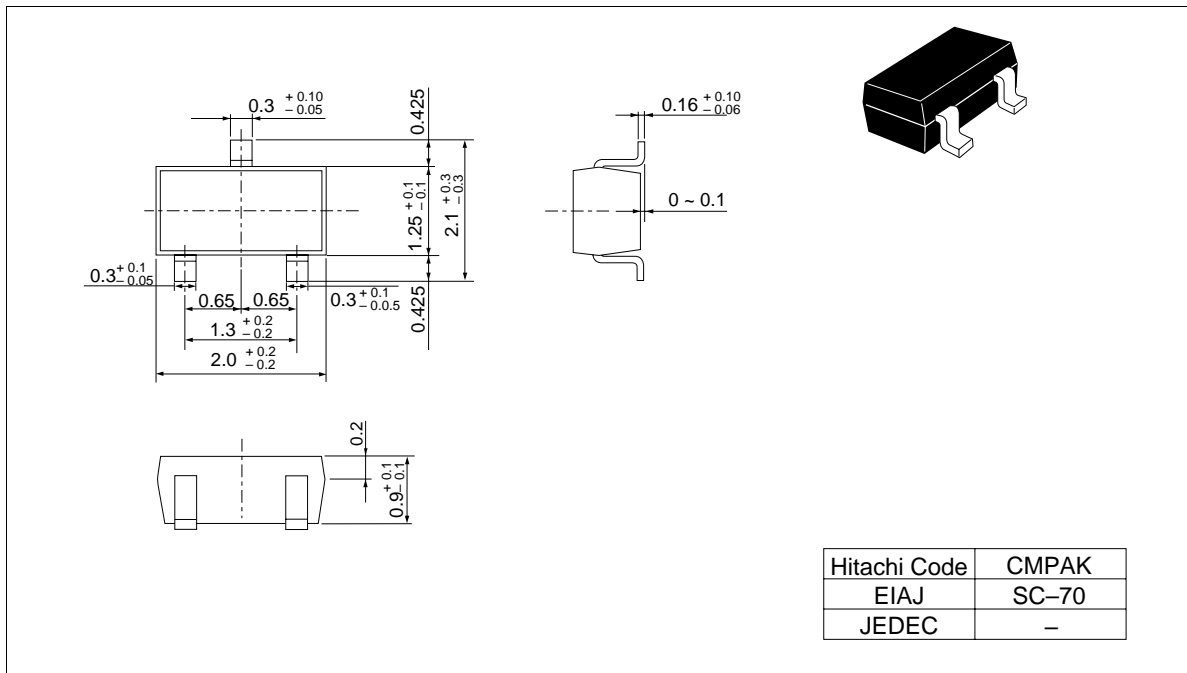
### Main Characteristics



## 2SK3289

### Package Dimensions

Unit: mm



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