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# 2SK2570

Silicon N-Channel MOS FET  
Low Frequency Power Switching

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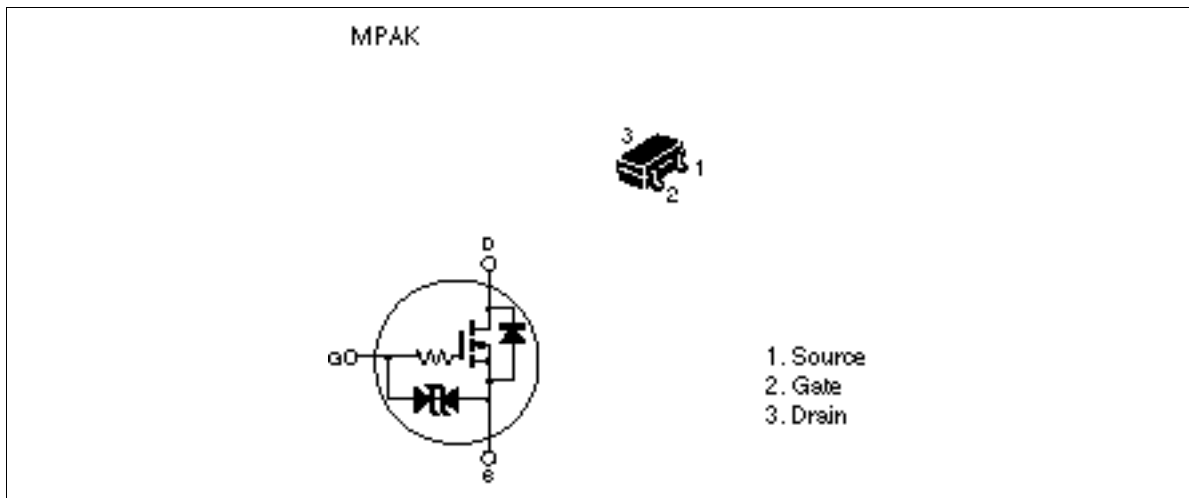
ADE-208-574  
1st. Edition

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## Features

- Low on-resistance  
 $R_{DS(on)} = 0.8\Omega$  typ. ( $V_{GS} = 4\text{ V}$ ,  $I_D = 100\text{ mA}$ )
- 2.5V gate drive devices.
- Small package (MPAK)

## Outline



## 2SK2570

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

Item	Symbol	Ratings	Unit
Drain to source voltage	V <sub>DSS</sub>	20	V
Gate to source voltage	V <sub>GSS</sub>	±10	V
Drain current	I <sub>D</sub>	0.2	A
Drain peak current	I <sub>D(pulse)</sub> *1	0.4	A
Channel dissipation	P <sub>ch</sub>	150	mW
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note: 1. PW ≤ 10μs, duty cycle ≤ 1 %

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

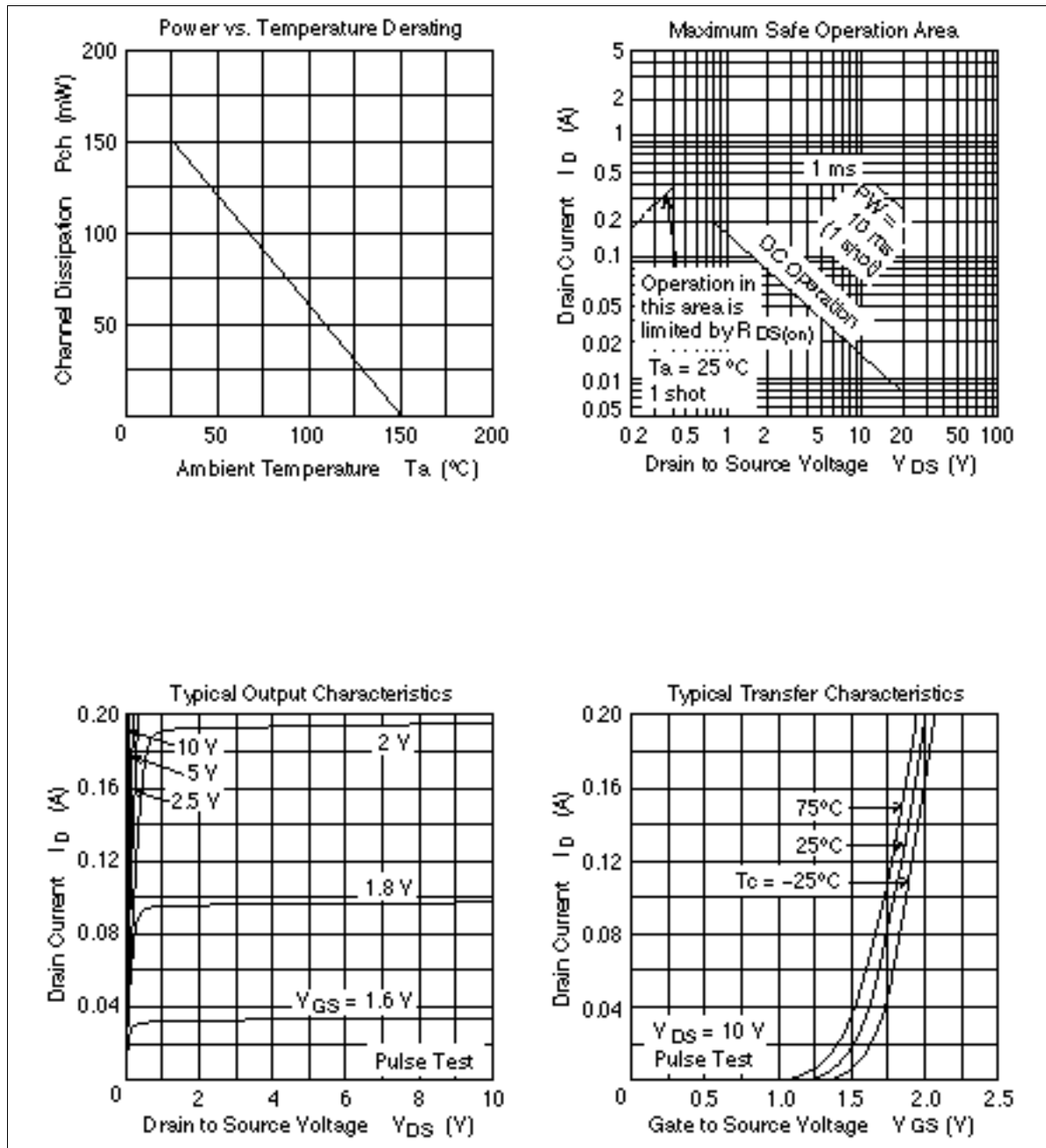
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V <sub>(BR)DSS</sub>	20	—	—	V	I <sub>D</sub> = 10μA, V <sub>GS</sub> = 0
Gate to source breakdown voltage	V <sub>(BR)GSS</sub>	±10	—	—	V	I <sub>G</sub> = ±100μA, V <sub>DS</sub> = 0
Zero gate voltage drain current	I <sub>DSS</sub>	—	—	1.0	μA	V <sub>DS</sub> = 20 V, V <sub>GS</sub> = 0
Gate to source leak current	I <sub>GSS</sub>	—	—	±5.0	μA	V <sub>GS</sub> = ±6.5V, V <sub>DS</sub> = 0
Gate to source cutoff voltage	V <sub>GS(off)</sub>	0.5	—	1.5	V	I <sub>D</sub> = 10μA, V <sub>DS</sub> = 5V
Static drain to source on state resistance	R <sub>DS(on)</sub>	—	0.8	1.1	Ω	I <sub>D</sub> = 100 mA V <sub>GS</sub> = 4V *1
			—	1.3	2.2	Ω
Forward transfer admittance	y <sub>fs</sub>	0.22	0.35	—	S	I <sub>D</sub> = 100 mA V <sub>DS</sub> = 10V *1
Input capacitance	C <sub>iss</sub>	—	45	—	pF	V <sub>DS</sub> = 10V
Output capacitance	C <sub>oss</sub>	—	33	—	pF	V <sub>GS</sub> = 0
Reverse transfer capacitance	C <sub>rss</sub>	—	9.6	—	pF	f = 1MHz
Turn-on delay time	t <sub>d(on)</sub>	—	20	—	ns	V <sub>GS</sub> = 5V, I <sub>D</sub> = 100 mA
Rise time	t <sub>r</sub>	—	60	—	ns	R <sub>L</sub> = 100Ω
Turn-off delay time	t <sub>d(off)</sub>	—	240	—	ns	
Fall time	t <sub>f</sub>	—	140	—	ns	

Notes: 1. Pulse test

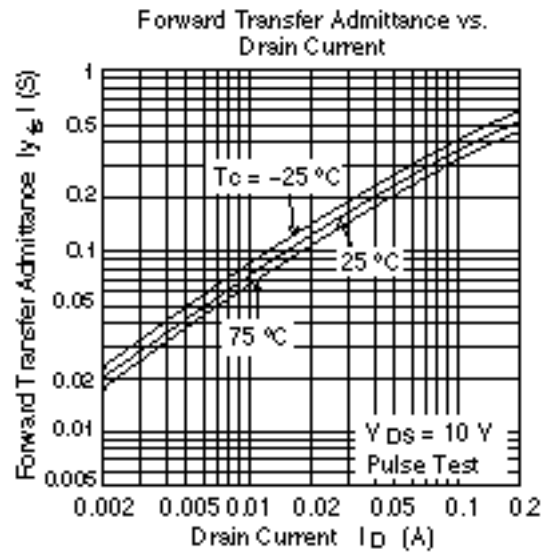
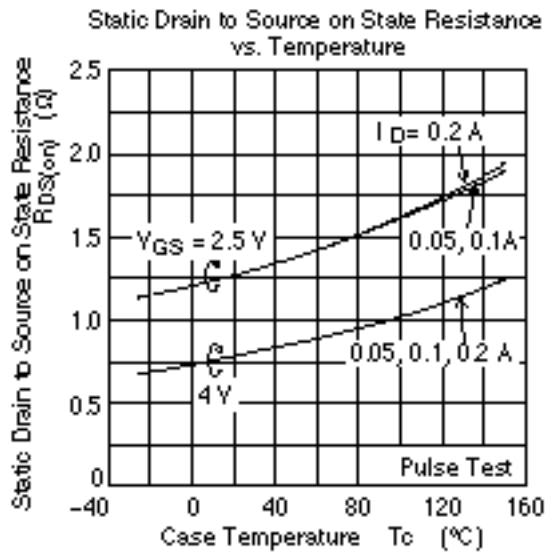
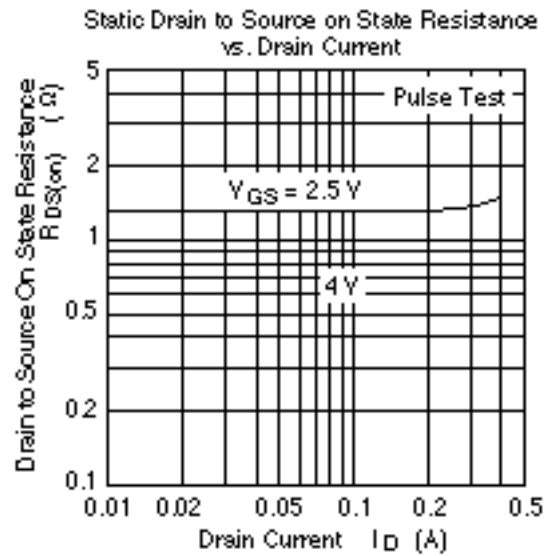
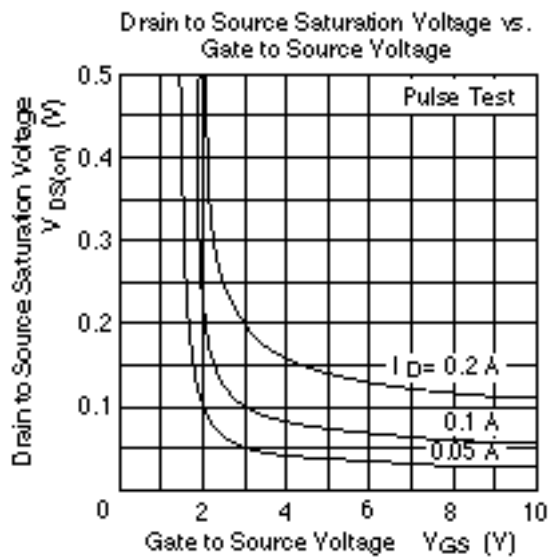
2. Marking is “ZL-”

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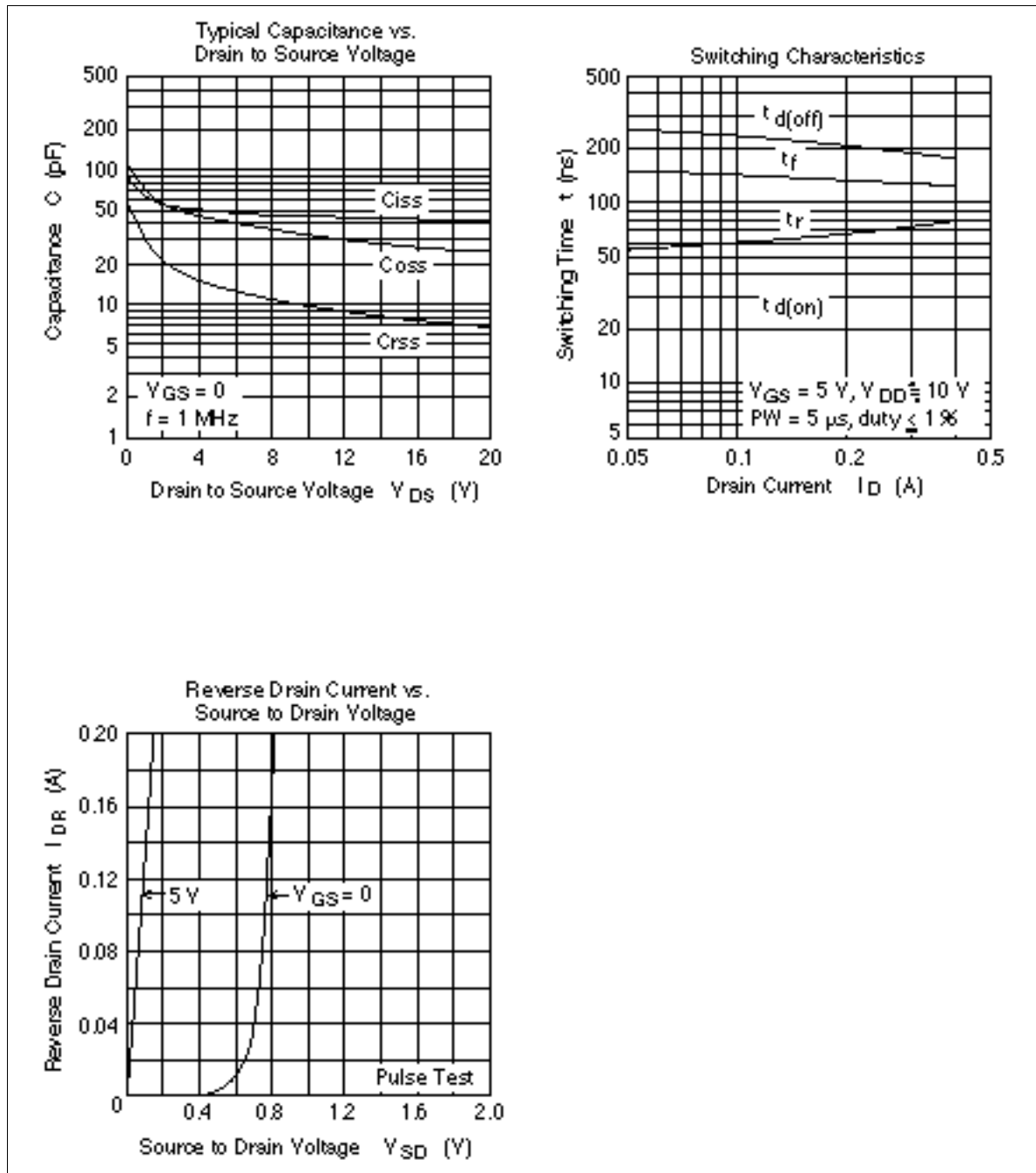
Main Characteristics



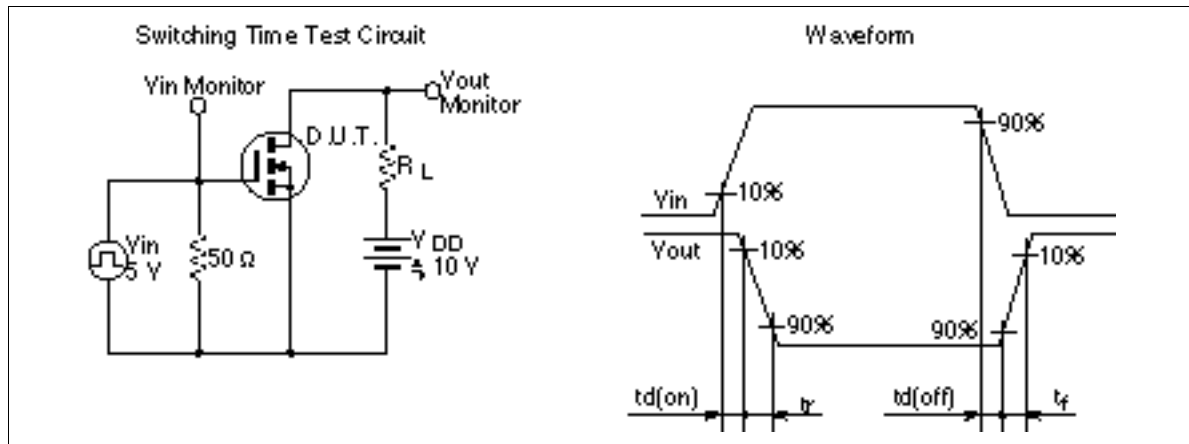
## 2SK2570



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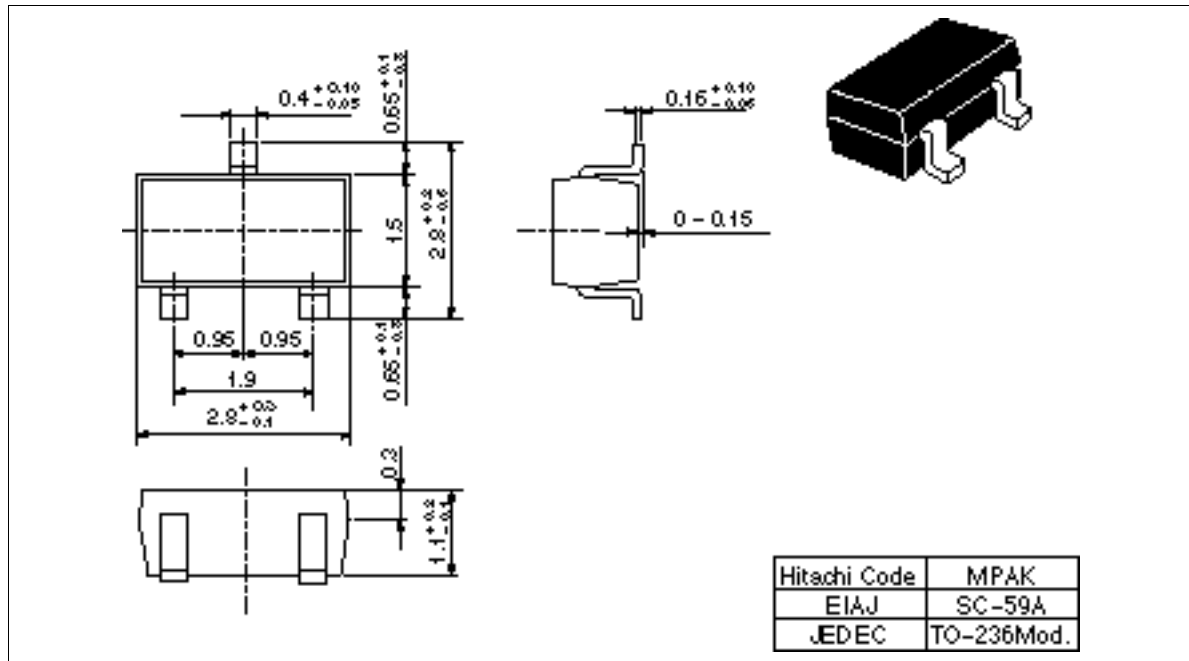
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Package Dimensions

Unit: mm



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