
2SK2980

Silicon N-Channel MOS FET
Low Frequency Power Switching

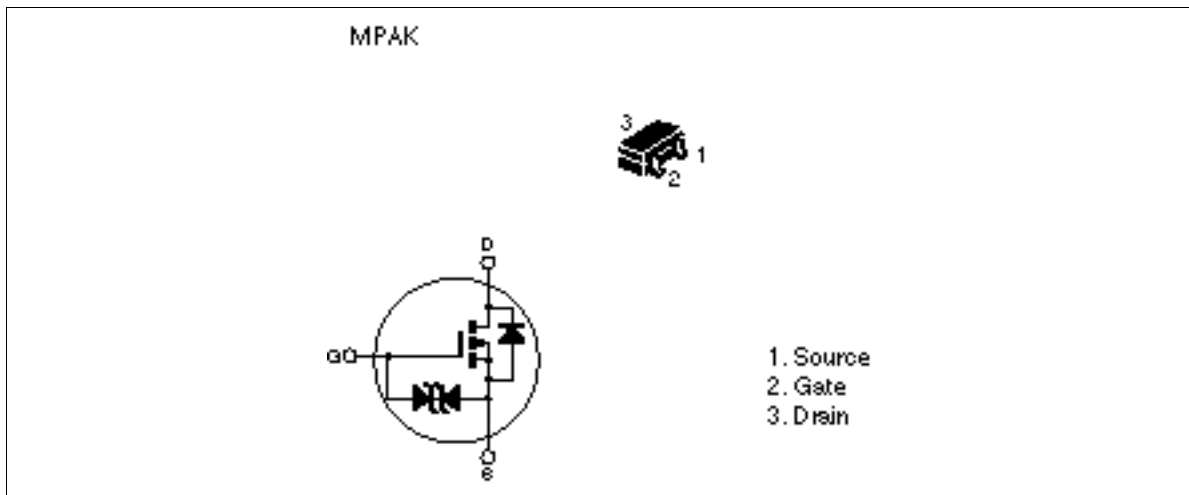
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ADE-208-571
1st. Edition

Features

- Low on-resistance
 $R_{DS(on)} = 0.2\Omega$ typ. ($V_{GS} = 4\text{ V}$, $I_D = 500\text{ mA}$)
- 2.5V gate drive devices.
- Small package (MPAK)

Outline



2SK2980

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V _{DSS}	30	V
Gate to source voltage	V _{GSS}	+12	V
		-10	V
Drain current	I _D	1.0	A
Drain peak current	I _{D(pulse)} *1	4	A
Channel dissipation	P _{ch} *2	0.8	W
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

Notes: 1. PW ≤ 10μs, duty cycle ≤ 1 %

2. Value at when using alumina ceramic board (12.5 x 20 x 0.7 mm)

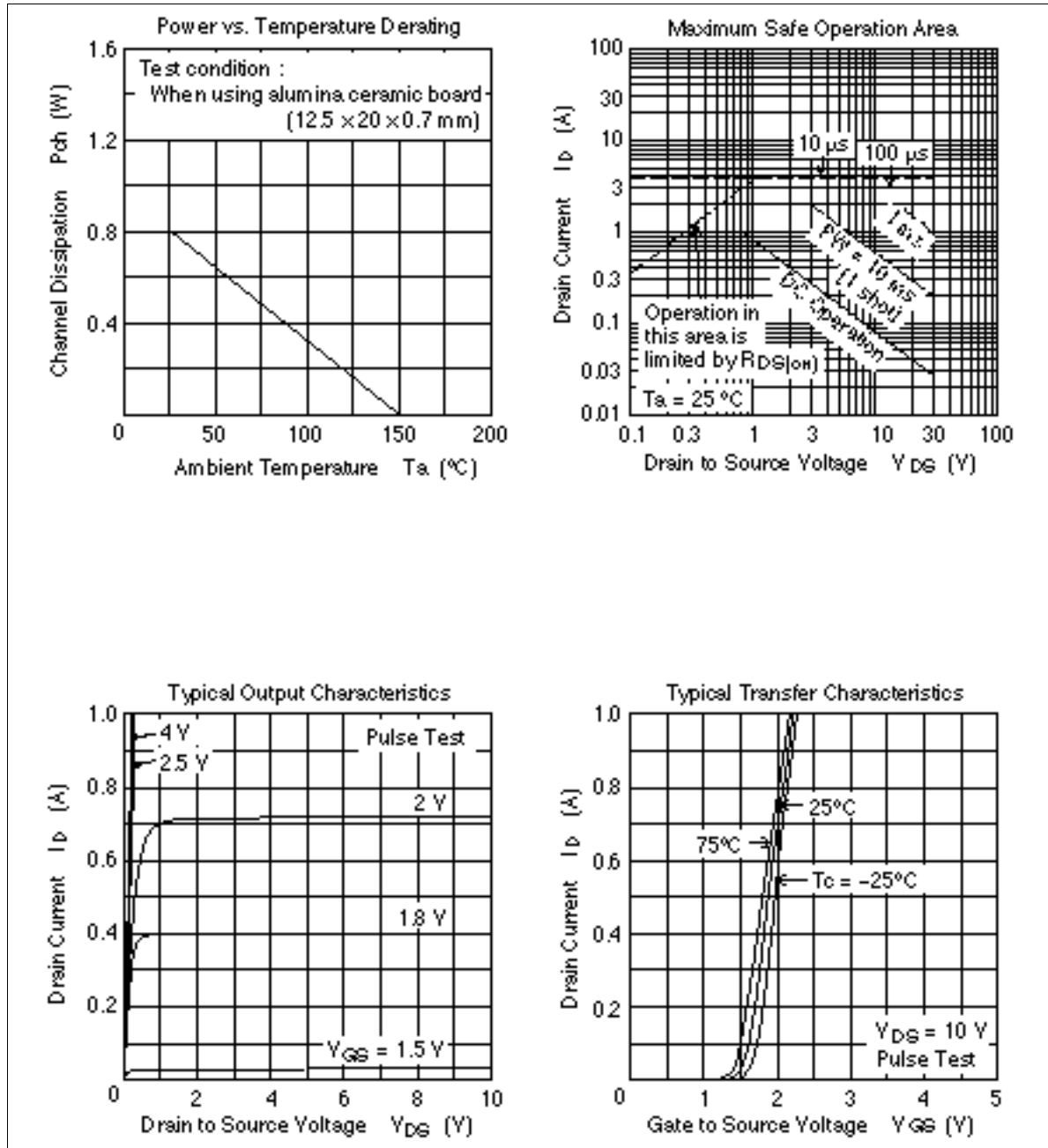
Electrical Characteristics (Ta = 25°C)

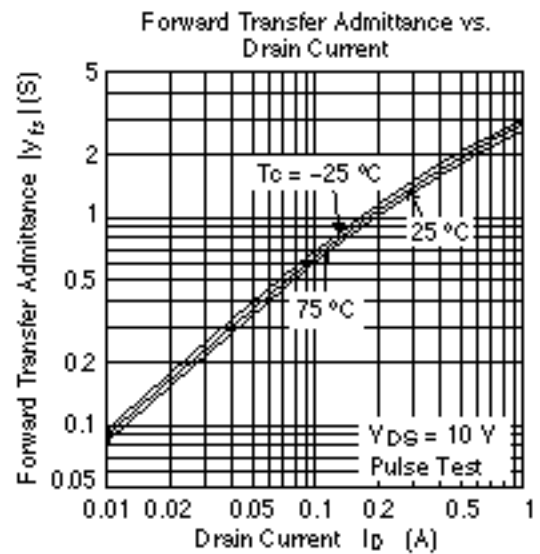
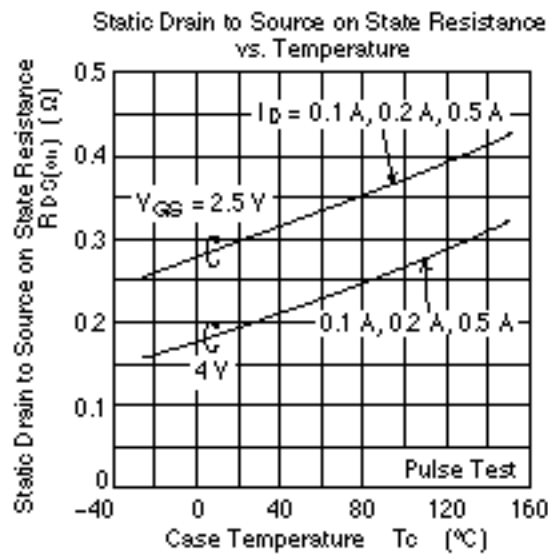
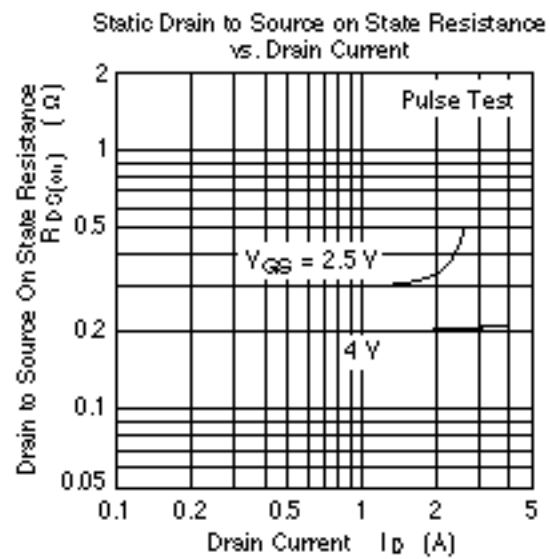
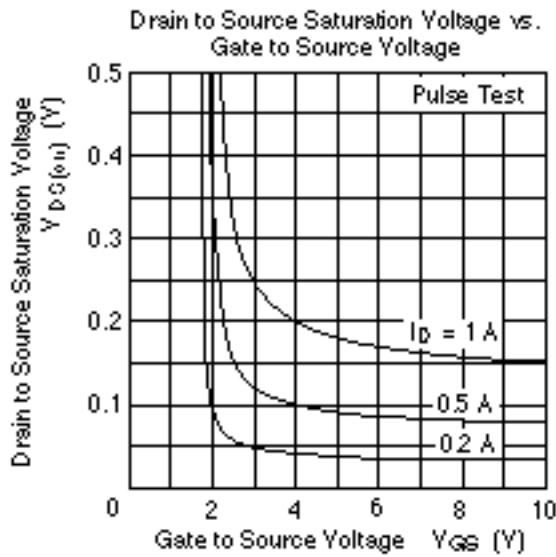
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	V _{(BR)DSS}	30	—	—	V	I _D = 100μA, V _{GS} = 0
Gate to source breakdown voltage	V _{(BR)GSS}	+12	—	—	V	I _G = +100μA, V _{DS} = 0
		-10	—	—	V	I _G = -100μA, V _{DS} = 0
Zero gate voltage drain current	I _{DSS}	—	—	1.0	μA	V _{DS} = 30 V, V _{GS} = 0
Gate to source leak current	I _{GSS}	—	—	±5.0	μA	V _{GS} = ±8V, V _{DS} = 0
Gate to source cutoff voltage	V _{GS(off)}	0.5	—	1.5	V	I _D = 10μA, V _{DS} = 5V
Static drain to source on state resistance	R _{DS(on)}	—	0.2	0.28	Ω	I _D = 500 mA V _{GS} = 4V*1
		—	0.3	0.5	Ω	I _D = 500 mA V _{GS} = 2.5V*1
Forward transfer admittance	y _{fs}	1.2	2.0	—	S	I _D = 500 mA V _{DS} = 10V*1
Input capacitance	C _{iss}	—	155	—	pF	V _{DS} = 10V
Output capacitance	C _{oss}	—	75	—	pF	V _{GS} = 0
Reverse transfer capacitance	C _{rss}	—	35	—	pF	f = 1MHz
Turn-on delay time	t _{d(on)}	—	12	—	μs	V _{GS} = 4V, I _D = 500 mA
Rise time	t _r	—	30	—	μs	R _L = 20Ω
Turn-off delay time	t _{d(off)}	—	35	—	μs	
Fall time	t _f	—	30	—	μs	

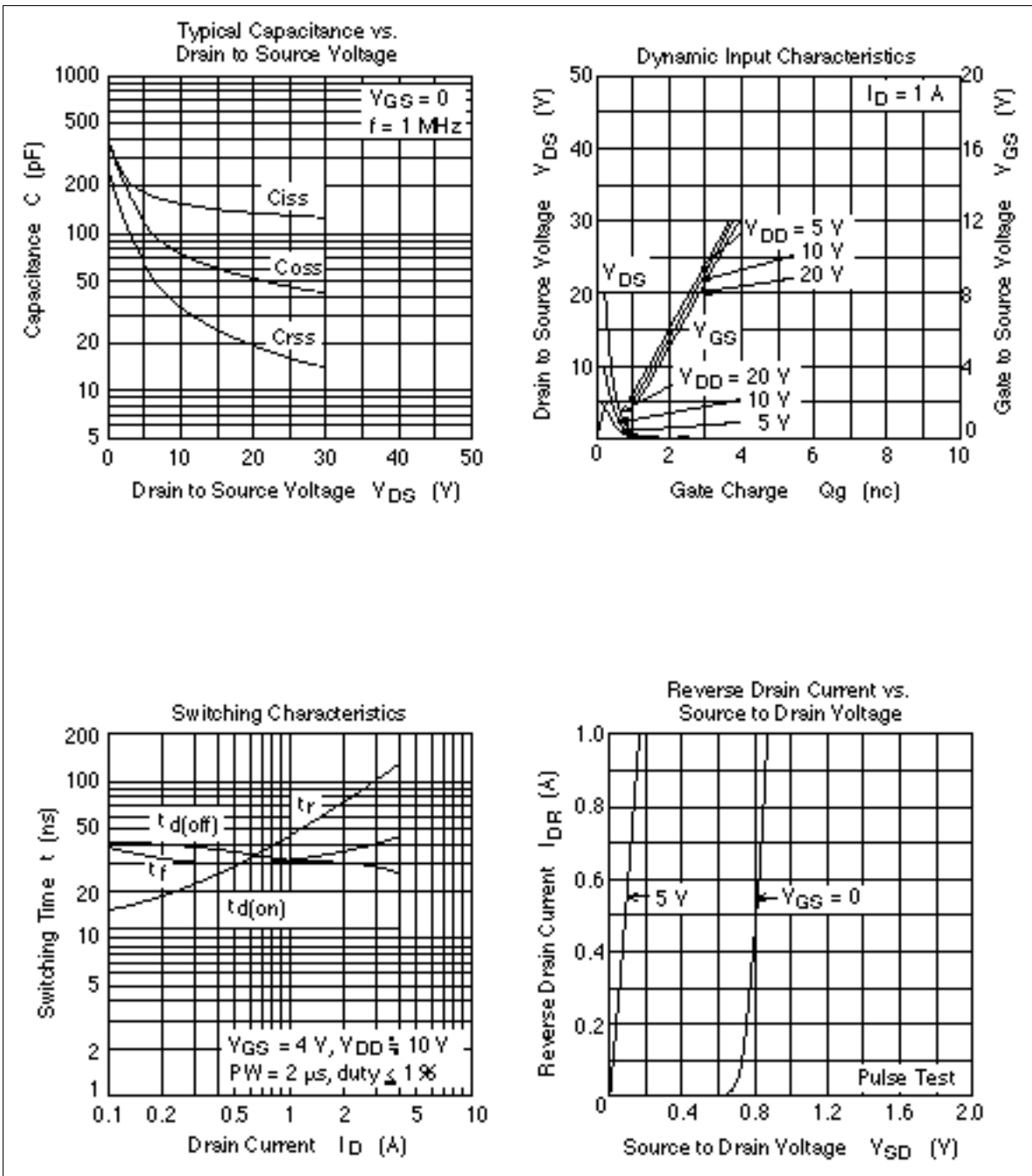
Note: 1. Pulse test

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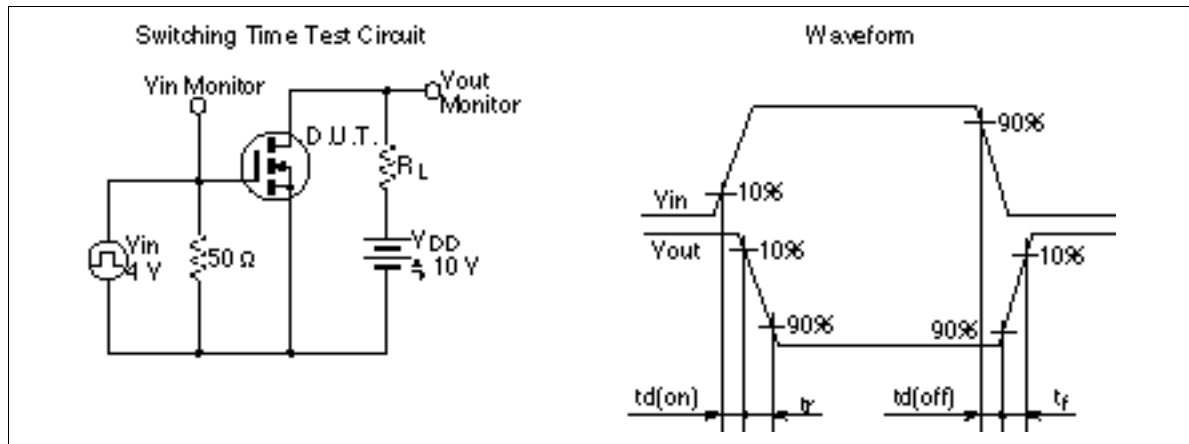
Main Characteristics







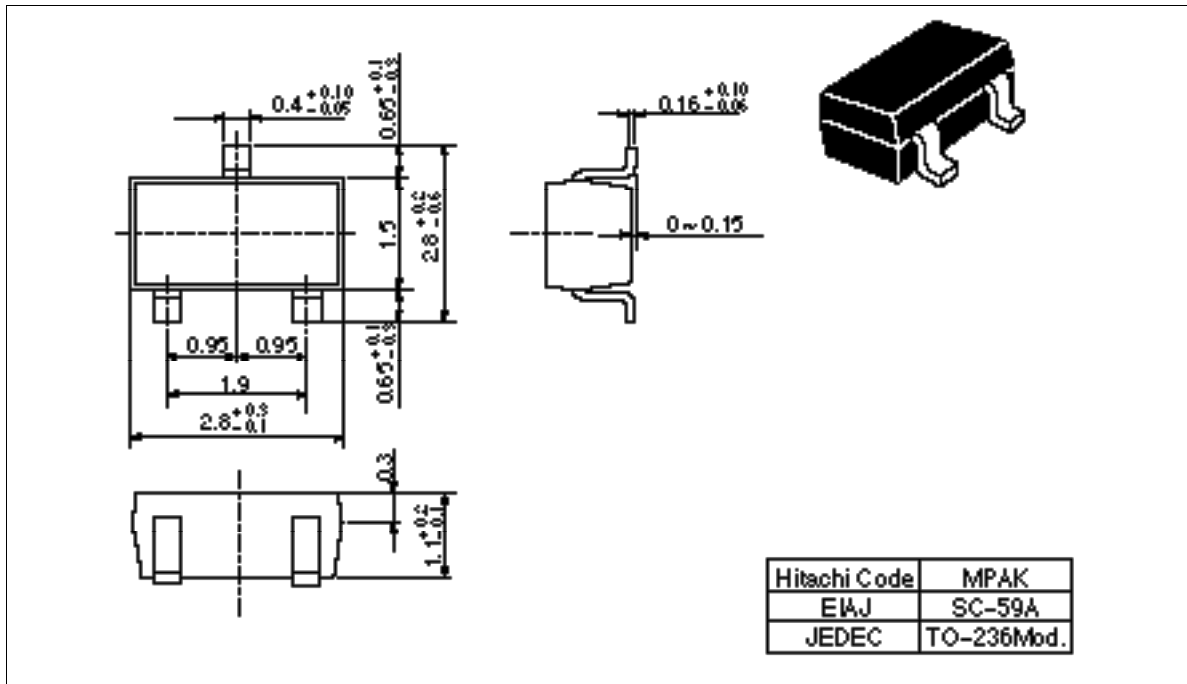
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Package Dimensions

Unit: mm



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