

2SK995

Silicon N-channel Power F-MOS FET

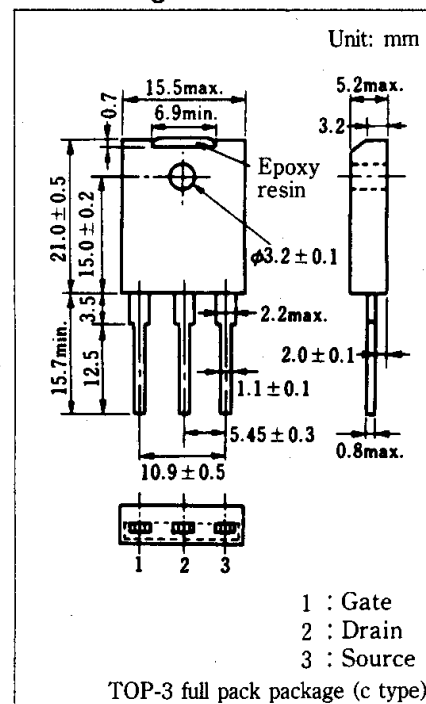
■ Features

- Low ON resistance $R_{DS(on)}$: $R_{DS(on)} = 1.2\Omega$ (typ.)
- High switching rate : $t_f = 65\text{ns}$ (typ.)
- No secondary breakdown
- High breakdown voltage, large power
- Fast recovery diode (FRD) built-in

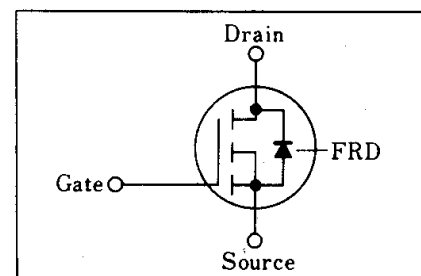
■ Application

- No contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching power source

■ Package Dimensions



■ Inner Circuit



■ Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Value	Unit
Drain-source voltage	V_{DSS}	550	V
Gate-source voltage	V_{GSS}	± 20	V
Drain current	DC	I_D	5
	Peak-to-peak value	I_{DP}	10
Power dissipation	$T_c = 25^\circ\text{C}$	P_D	60
	$T_a = 25^\circ\text{C}$	P_D	3.0
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit	
Drain current	I_{DSS}	$V_{DS} = 440\text{V}, V_{GS} = 0$			0.1	mA	
Gate-source current	I_{GSS}	$V_{GS} = \pm 20\text{V}, V_{DS} = 0$			± 1	μA	
Drain-source voltage	V_{DSS}	$I_D = 1\text{mA}, V_{GS} = 0$	550			V	
Gate threshold voltage	V_{th}	$V_{DS} = 25\text{V}, I_D = 1\text{mA}$	1		5	V	
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}, I_D = 3\text{A}$		1.2	1.8	Ω	
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 25\text{V}, I_D = 3\text{A}$	3.5	5.5		S	
Input capacitance	C_{iss}	$V_{DS} = 20\text{V}, V_{GS} = 0, f = 1\text{MHz}$		1500		pF	
Output capacitance	C_{oss}				160		pF
Reverse transfer capacitance	C_{rss}				50		pF
Turn-on time	t_{on}	$V_{GS} = 10\text{V}, I_D = 3\text{A}$ $V_{DD} = 150\text{V}, R_L = 50\Omega$		50		ns	
Fall time	t_f				65		ns
Delay time	$t_d(\text{off})$				300		ns
Reverse time	t_{rr}	$I_F = 1\text{A}, I_R = 1\text{A}$		200	400	ns	