

2SK757

Silicon N-channel Power F-MOS FET

■ Features

- Low ON resistance $R_{DS(on)}$: $R_{DS(on)} = 0.22\Omega$ (typ.)
- High switching rate : $t_f = 60\text{ns}$ (typ.)
- No secondary breakdown

■ Application

- DC-DC converter
- No contact relay
- Solenoid drive
- Motor drive

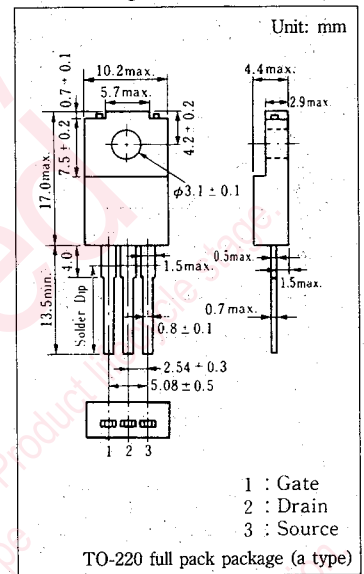
■ Absolute Maximum Ratings (Tc=25°C)

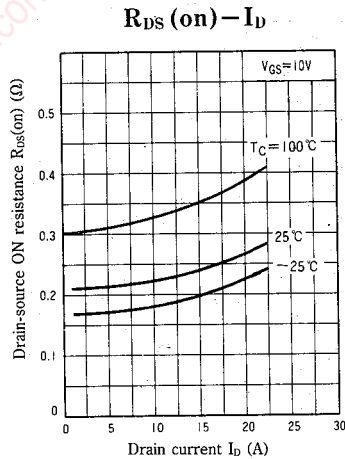
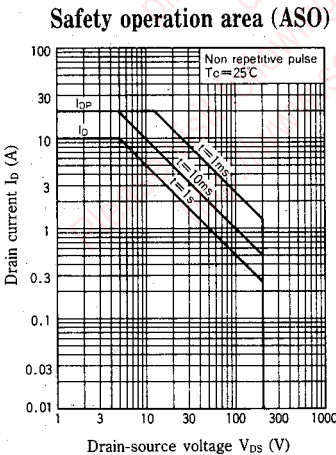
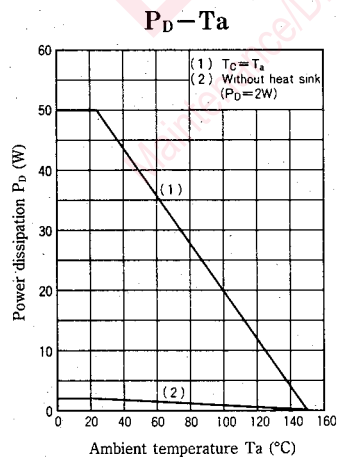
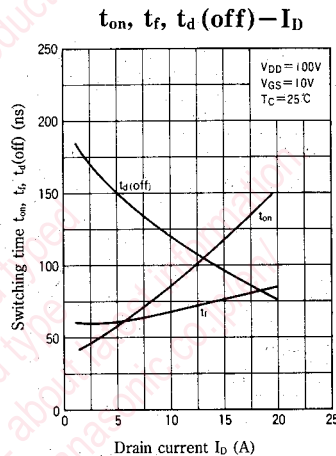
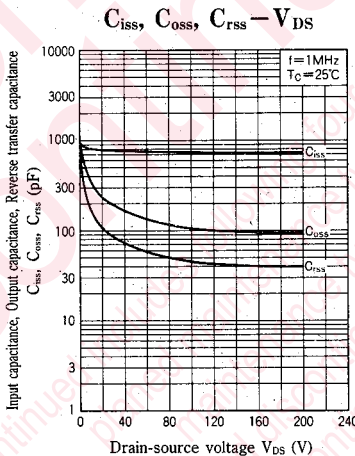
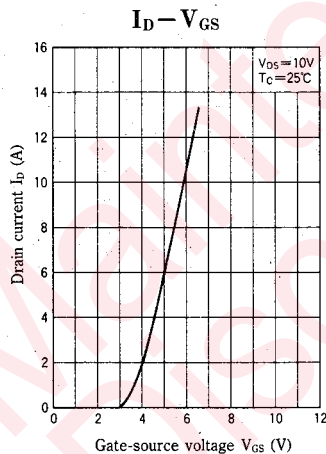
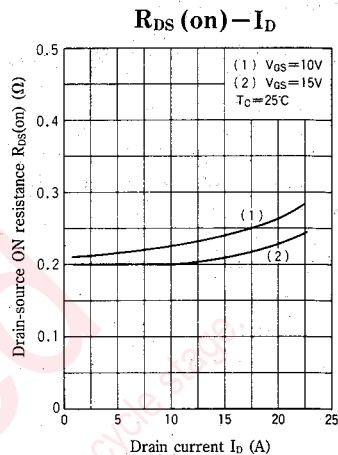
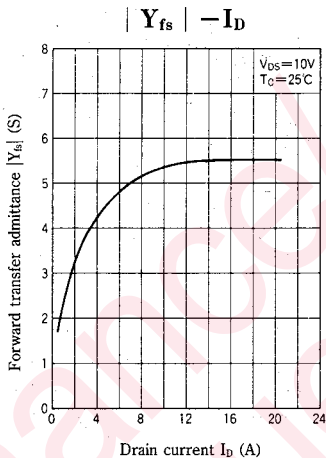
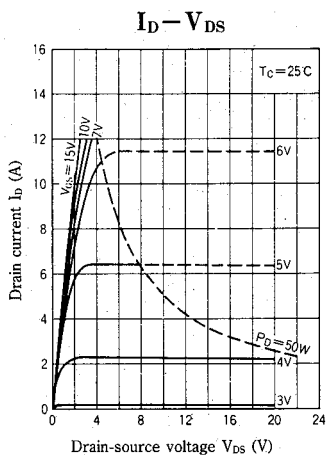
Item	Symbol	Value	Unit
Drain-source voltage	V_{DS}	200	V
Gate-source voltage	V_{GS}	± 20	V
Drain current	DC	I_D	10
	Peak-to-peak value	I_{DP}	20
Power dissipation	Tc=25°C	P_D	50
	Ta=25°C		2.0
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit	
Drain current	I_{DSS}	$V_{DS} = 160\text{V}, V_{GS} = 0$			0.1	mA	
Gate-source current	I_{GSS}	$V_{GS} = \pm 20\text{V}, V_{DS} = 0$			± 1	μA	
Drain-source voltage	V_{DSS}	$I_D = 1\text{mA}, V_{GS} = 0$	200			V	
Gate threshold voltage	V_{th}	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$	1		5	V	
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}, I_D = 5\text{A}$		0.22	0.33	Ω	
Forward transfer admittance	$ Y_{fs} $	$V_{GS} = 10\text{V}, I_D = 5\text{A}$	2.7	4.5		S	
Input capacitance	C_{iss}	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$		855		pF	
Output capacitance	C_{oss}				330		pF
Reverse transfer capacitance	C_{rss}				150		pF
Turn-on time	t_{on}				60		ns
Fall time	t_f	$V_{GS} = 10\text{V}, I_D = 5\text{A}$		60		ns	
Delay time	$t_d(\text{off})$	$V_{DD} = 100\text{V}, R_L = 20\Omega$		150		ns	

■ Package Dimensions





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