2SK764, 2SK764A

Silicon N-channel Power F-MOS FET

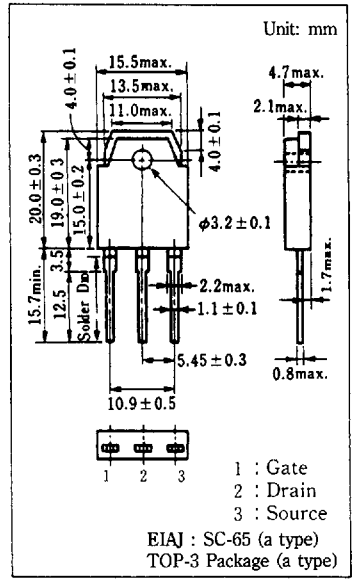
■ Features

- Low ON resistance R_{DS} (on) : R_{DS} (on) = 0.5Ω (typ.)
- High switching rate : t_f = 90ns (typ.)
- No secondary breakdown
- High breakdown voltage, large power

■ Application

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

■ Package Dimensions



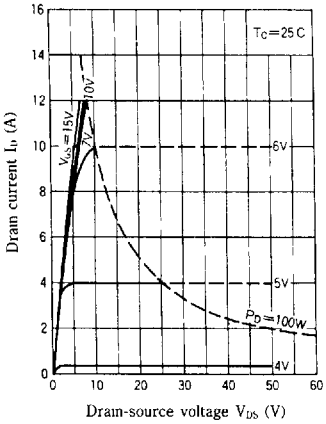
■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Drain-source voltage	2SK764	V_{DSS}	400	V
	2SK764A		450	
Gate-source voltage		V_{GSS}	±20	V
Drain current	DC	I_D	10	A
	Peak-to-peak value	I_{DP}	20	
Power dissipation	Tc=25℃	P_D	100	W
	Ta=25℃		2.5	
Channel temperature		T_{ch}	150	℃
Storage temperature		T_{stg}	−55~+150	℃

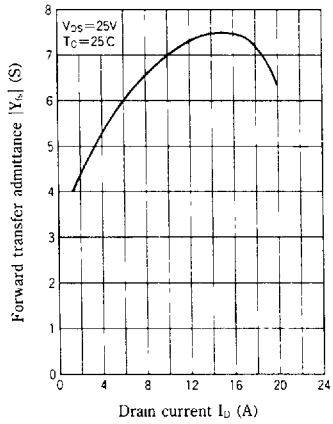
■ Electrical Characteristics (Tc=25°C)

Item		Symbol	Condition	min.	typ.	max.	Unit
Drain current		I_{DSS}	V_{DS}=320V, V_{GS}=0			0.1	mA
Gate-source current		I_{GSS}	V_{GS}=±20V, V_{DS}=0			±1	μA
Drain-source voltage	2SK764	V_{DSS}	I_D= 1 mA, V_{GS}=0	400			V
	2SK764A			450			
Gate threshold voltage		V_{th}	V_{DS}=25V, I_D=1mA	1		5	V
Drain-source ON resistance		R_{DS}(on)	V_{GS}=10V, I_D=5A		0.5	0.75	Ω
Forward transfer admittance		| Yfs |	V_{DS}=25V, I_D=5A	3.5	5.5		S
Input capacitance		C_{iss}	V_{DS}=20V, V_{GS}=0, f=1MHz		1100		pF
Output capacitance		C_{oss}			215		pF
Reverse transfer capacitance		C_{rss}			100		pF
Turn-on time		t_{on}	V_{GS}=10V, I_D=5A V_{DD}=150V, R_L=30Ω		70		ns
Fall time		t_f			90		ns
Delay time		$t_{d(off)}$			230		ns

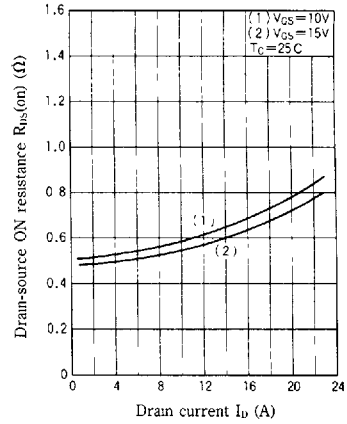
$I_D - V_{DS}$



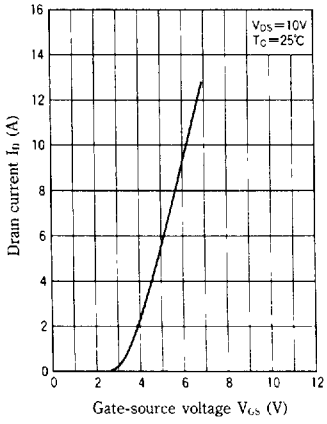
$|Y_{fs}| - I_D$



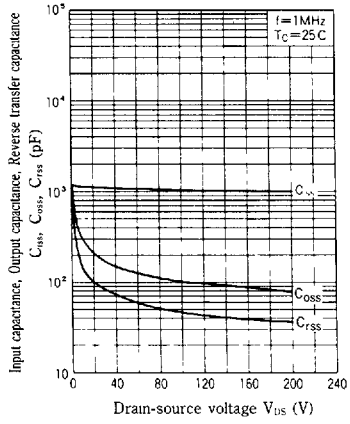
$R_{DS}(on) - I_D$



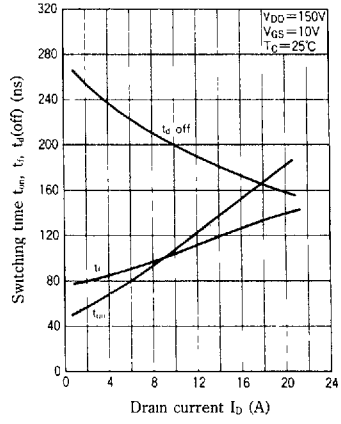
$I_D - V_{GS}$



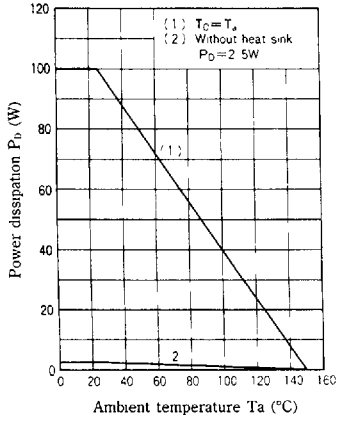
$C_{iss}, C_{oss}, C_{rss} - V_{DS}$



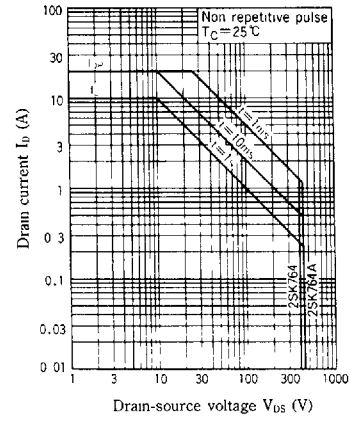
$t_{on}, t_f, t_d(off) - I_D$



$P_D - Ta$



Safety operation area (ASO)



$R_{DS}(on) - I_D$