2SK2660

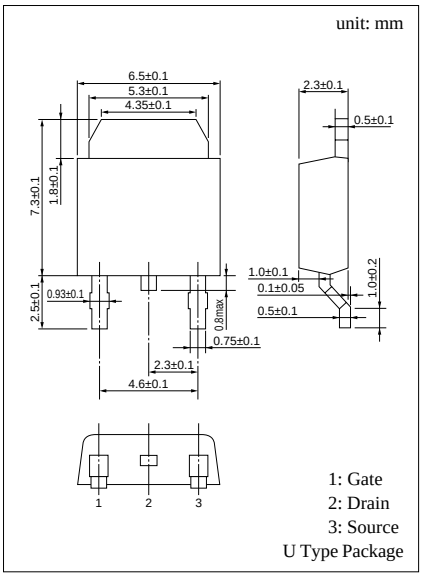
Silicon N-Channel Power F-MOS FET

■ Features

- High-speed switching
- High drain-source voltage

■ Applications

- High-speed switching



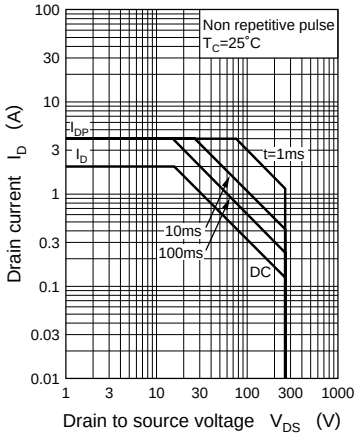
■ Absolute Maximum Ratings (T_C = 25°C)

Parameter		Symbol	Ratings	Unit
Drain to Source breakdown voltage		V_{DSS}	200	V
Gate to Source voltage		V_{GSS}	±30	V
Drain current	DC	I_D	±4	A
	Pulse	I_{DP}	±8	A
Allowable power dissipation	T_C = 25°C	P_D	10	W
	Ta = 25°C		1	
Channel temperature		T_{ch}	150	°C
Storage temperature		T_{stg}	–55 to +150	°C

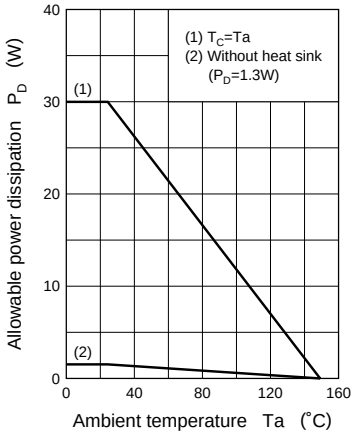
■ Electrical Characteristics (T_C = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS}	V_{DS} = 160V, V_{GS} = 0			0.1	mA
Gate to Source leakage current	I_{GSS}	V_{GS} = ±30V, V_{DS} = 0			±1	μA
Drain to Source breakdown voltage	V_{DSS}	I_D = 1mA, V_{GS} = 0	200			V
Gate threshold voltage	V_{th}	V_{DS} = 25V, I_D = 1mA	1		5	V
Drain to Source ON-resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 2A		0.8	1.1	Ω
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS} = 25V, I_D = 2A, f = 1MHz	0.5	1		S
Input capacitance (Common Source)	C_{iss}	V_{DS} = 20V, V_{GS} = 0, f = 1MHz		290		pF
Output capacitance (Common Source)	C_{oss}			50		pF
Reverse transfer capacitance (Common Source)	C_{rss}			9		pF
Turn-on time (delay time)	$t_{d(on)}$	V_{GS} = 10V, I_D = 2A, R_L = 50Ω, V_{DD} = 100V		10		ns
Rise time	t_r			25		ns
Turn-off time (delay time)	$t_{d(off)}$			45		ns
Fall time	t_f			40		ns

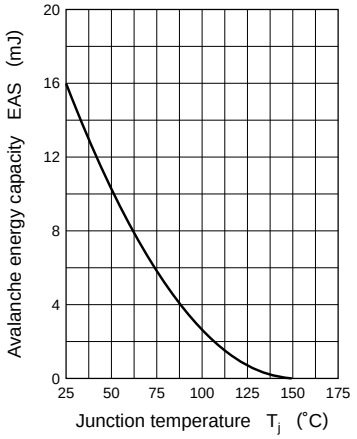
Area of safe operation (ASO)



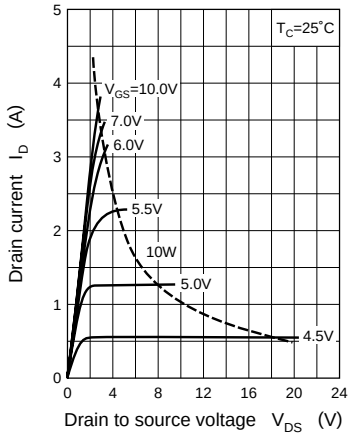
P_D — Ta



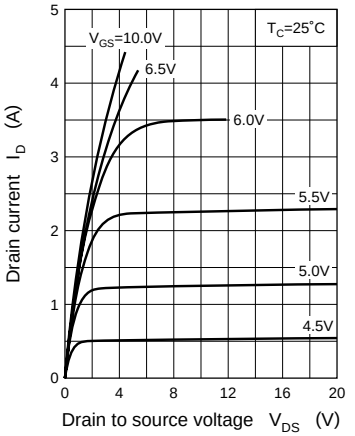
EAS — T_j



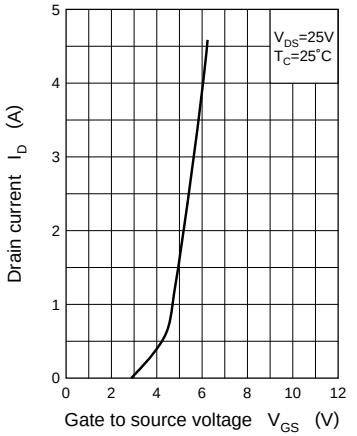
I_D — V_{DS}



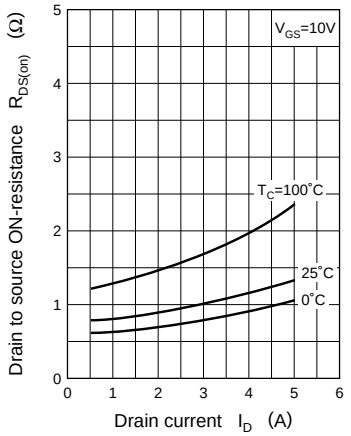
I_D — V_{DS}



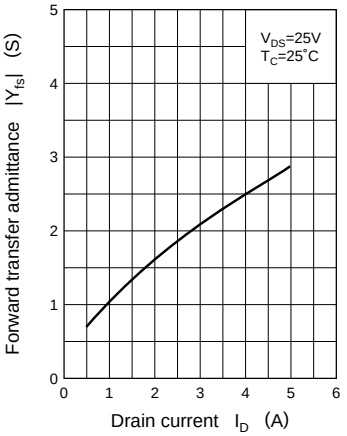
I_D — V_{GS}



$R_{DS(on)}$ — I_D



$|Y_{fs}|$ — I_D



C_{iss}, C_{oss}, C_{rss} — V_{DS}