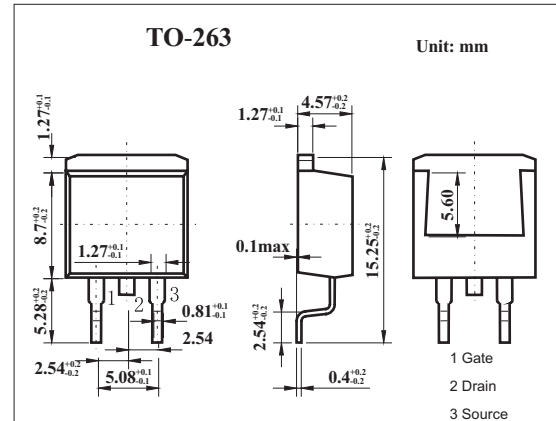


MOS Field Effect Transistor

2SK3713

■ Features

- Super high $V_{GS(off)}$: $V_{GS(off)} = 3.8$ to 5.8 V
- Low C_{rss} : $C_{rss} = 6.5$ pF TYP.
- Low Q_G : $Q_G = 25$ nC TYP.
- Low on-state resistance:
 $R_{DS(on)} = 0.83 \Omega$ MAX. ($V_{GS} = 10$ V, $I_D = 5$ A)



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	600	V
Gate to source voltage	V_{GS}	± 30	V
Drain current	I_D	± 10	A
	I_{DP}^*	± 35	A
Power dissipation $T_A=25^\circ\text{C}$ $T_C=25^\circ\text{C}$	P_D	1.5	W
		100	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10 \mu s$, Duty Cycle $\leq 1\%$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=600V, V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS} = \pm 30V, V_{DS}=0$			± 100	nA
Gate cut off voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	3.8	4.8	5.8	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=5A$	2.5	4.6		S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=5A$		0.68	0.83	Ω
Input capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$		1460		pF
Output capacitance	C_{oss}			250		pF
Reverse transfer capacitance	C_{rss}			6.5		pF
Turn-on delay time	t_{on}	$I_D=5A, V_{GS(on)}=10V, R_G=0 \Omega, V_{DD}=150V$		26		ns
Rise time	t_r			8.5		ns
Turn-off delay time	t_{off}			30		ns
Fall time	t_f			5.2		ns
Total Gate Charge	Q_G	$V_{DD} = 450V$		25		nC
Gate to Source Charge	Q_{GS}	$V_{GS} = 10 V$		12		nC
Gate to Drain Charge	Q_{GD}	$I_D = 10A$		9		nC