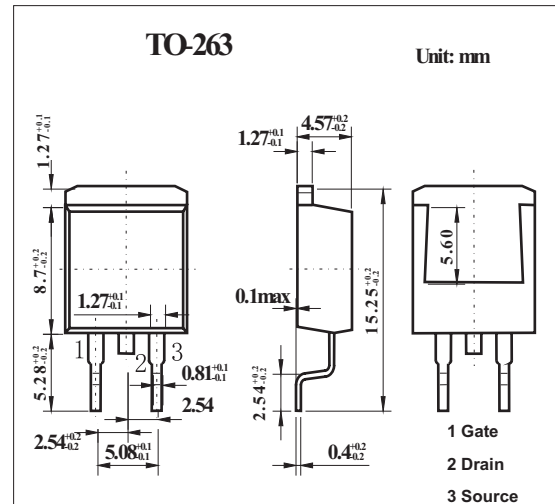


MOS Field Effect Transistors

2SK2481

■ Features

- Low On-state Resistance: $R_{DS(on)}=4\ \Omega$ max. ($V_{GS}=10V, I_D=2.0A$)
- Low Ciss Ciss=900pF TYP
- High Avalanche Capability Ratings

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

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V_{DS}	900	V
Gate to Source Voltage	V_{GS}	± 30	V
Drain Current(DC)	$I_{D(DC)}$	± 4	A
Drain Current(pulse) *1	$I_{D(pulse)}$	± 12	A
Total Power Dissipation $T_a = 25^\circ\text{C}$	P_T	1.5	W
Total Power Dissipation $T_c = 25^\circ\text{C}$		70	
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Single Avalanche Current *2	I_{AS}	4	A
Single Avalanche Energy *2	E_{AS}	65.9	mJ

*1. $PW \leq 10\ \mu\text{s}$, Duty cycle $\leq 1\%$.

*2. Starting $T_{ch}=25^\circ\text{C}$, $R_G=25\ \Omega$, $V_{GS}=20V \rightarrow 0$

2SK2481

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain to Source On-state Resistance	$R_{DS(on)}$	$V_{GS} = 10\text{ V}, I_D = 2.0\text{ A}$		3.2	4.0	Ω
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{ V}, I_D = 1\text{ mA}$	2.5		3.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 20\text{ V}, I_D = 2.0\text{ A}$	1.0			S
Drain Cut-off Current	I_{DSS}	$V_{DS} = V_{DSS}, V_{GS} = 0$			100	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 30\text{ V}, V_{DS} = 0$			± 100	nA
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}$ $V_{GS} = 0$ $f = 1\text{ MHz}$		900		pF
Output Capacitance	C_{oss}			130		pF
Feedback Capacitance	C_{rss}			25		pF
Turn-on Delay Time	$t_{d(on)}$	$I_D = 2.0\text{ A}$ $V_{GS} = 10\text{ V}$ $V_{DD} = 150\text{ V}$ $R_G = 10\ \Omega$		17		ns
Rise Time	t_r			7		ns
Turn-off Delay Time	$t_{d(off)}$			63		ns
Fall Time	t_f			8		ns
Total Gate Charge	Q_g	$I_D = 4.0\text{ A}$ $V_{DD} = 450\text{ V}$ $V_{GS} = 10\text{ V}$		30		nC
Gate-Source Charge	Q_{gs}			5		
Gate-Drain Charge	Q_{gd}			13		
Diode Forward Voltage	$V_{F(S-D)}$	$I_F = 4.0\text{ A}, V_{GS} = 0$		1.0		V
Reverse Recovery Time	t_{rr}	$I_F = 4.0\text{ A}, V_{GS} = 0$		710		ns
Reverse Recovery Charge	Q_{rr}	$di/dt = 50\text{ A}/\mu\text{s}$		3.5		μC