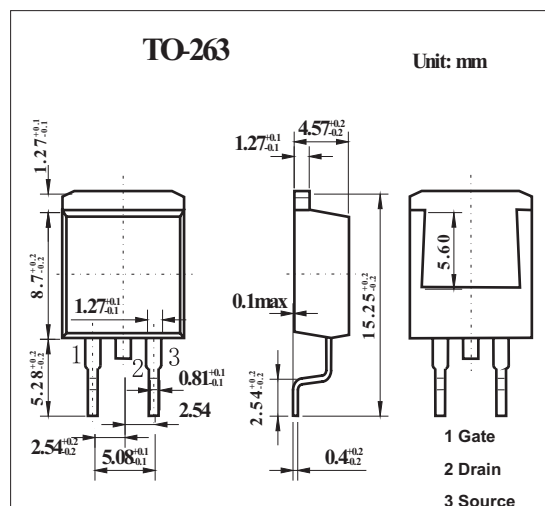


MOS Field Effect Transistor

2SK3325

■ Features

- Low gate charge:
Q_G = 22 nC TYP. (V_{DD} = 400 V, V_{GS} = 10 V, I_D = 10 A)
Gate voltage rating: ±30 V
- Low on-state resistance
R_{DS(on)} = 0.85 Ω MAX. (V_{GS} = 10 V, I_D = 5.0 A)
- Avalanche capability ratings



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V _{DSS}	500	V
Gate to Source Voltage	V _{GSS}	±30	V
Drain Current(DC)	I _{D(DS)}	±10	A
Drain Current(pulse) *1	I _{D(pulse)}	±40	A
Total Power Dissipation (Ta = 25°C)	P _T	1.5	W
Total Power Dissipation (Tc = 25°C)		85	
Channel Temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C
Single Avalanche Current *2	I _{AS}	10	A
Single Avalanche Energy *2	E _{AS}	10.7	mJ

*1. PW ≤ 10 μs, D duty cycle ≤ 1%.

*2. Starting T_{ch} = 25°C, V_{DD} = 150 V, R_G = 25 Ω, V_{GS} = 20 V → 0 V

2SK3325

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain Cut-off Current	I_{DSS}	$V_{DS} = 500\text{ V}, V_{GS} = 0\text{ V}$			100	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 30\text{ V}, V_{DS} = 0\text{ V}$			± 100	nA
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} $	$V_{DS} = 10\text{ V}, I_D = 5.0\text{ A}$	2.0	4.0		S
Drain to Source On-state Resistance	$R_{DS(on)}$	$V_{GS} = 10\text{ V}, I_D = 5.0\text{ A}$		0.68	0.85	Ω
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V}, f = 1\text{ MHz}$		1200		pF
Output Capacitance	C_{oss}			190		pF
Feedback Capacitance	C_{rss}			10		pF
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 150\text{ V}, I_D = 5.0\text{ A}, V_{GS(on)} = 10\text{ V}, R_G = 10\text{ }\Omega, R_L = 60\text{ }\Omega$		21		ns
Rise Time	t_r			11		ns
Turn-off Delay Time	$t_{d(off)}$			40		ns
Fall Time	t_f			9.5		ns
Total Gate Charge	Q_g	$V_{DD} = 400\text{ V}, V_{GS} = 10\text{ V}, I_D = 10\text{ A}$		22		nC
Gate-Source Charge	Q_{gs}			6.5		nC
Gate-Drain Charge	Q_{gd}			7.5		nC
Diode Forward Voltage	$V_{F(S-D)}$	$I_F = 10\text{ A}, V_{GS} = 0\text{ V}$		1.0		V
Reverse Recovery Time	t_{rr}	$I_F = 10\text{ A}, V_{GS} = 0\text{ V}, di/dt = 50\text{ A}/\mu\text{s}$		0.5		μs
Reverse Recovery Charge	Q_{rr}			2.6		μC