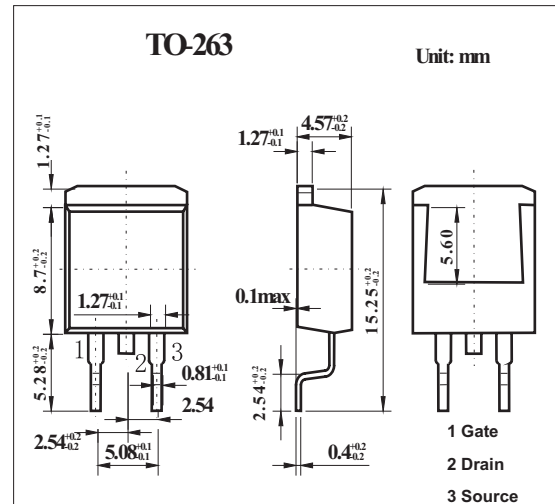


MOS Field Effect Transistor

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_{BS(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 (T _A = 25°C)	P _T	1.5	W
Total Power Dissipation (T _C = 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 V, V _{GS} = 0 V			100	μA
Gate Leakage Current	I _{GSS}	V _{GS} = ±30 V, V _{DS} = 0 V			±100	nA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = 10 V, I _D = 1 mA	2.5		3.5	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10 V, I _D = 5.0 A	2.0	4.0		S
Drain to Source On-state Resistance	R _{DS(on)}	V _{GS} = 10 V, I _D = 5.0 A		0.68	0.85	Ω
Input Capacitance	C _{iss}	V _{DS} = 10 V, V _{GS} = 0 V, f = 1 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 V, I _D = 5.0 A, V _{GS(on)} = 10 V, R _G = 10 Ω, R _L = 60 Ω		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 V, V _{GS} = 10 V, I _D = 10 A		22	
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 A, V _{GS} = 0 V		1.0		V
Reverse Recovery Time	t _{rr}	I _F = 10 A, V _{GS} = 0 V, di/dt = 50 A / μs		0.5		μs
Reverse Recovery Charge	Q _{rr}			2.6		μC