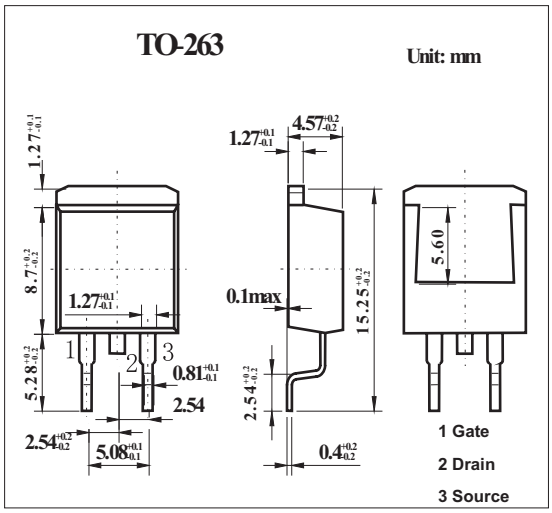
MOS Field Effect Transistor

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℃

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℃)	P_T	1.5	W
Total Power Dissipation (T_C = 25℃)		85	
Channel Temperature	Tch	150	℃
Storage temperature	Tstg	-55 to +150	℃
Single Avalanche Current *2	I_{AS}	10	A
Single Avalanche Energy *2	E_{AS}	10.7	mJ

*1. PW≤10μs,Dduty cycle≤1%.

*2. Starting Tch = 25℃, V_{DD} = 150 V, R_G = 25 Ω, V_{GS} = 20 V → 0 V

2SK3325

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	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		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 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