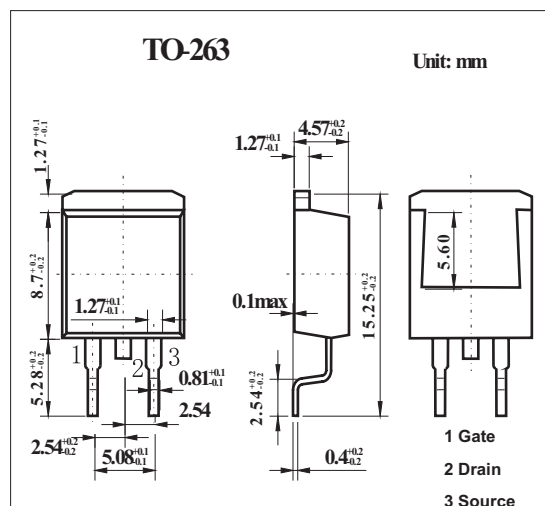


MOS Field Effect Transistor

2SK3295

■ Features

- 4.5 V drive available
- Low on-state resistance
 $R_{DS(on)1} = 18 \text{ m}\Omega \text{ MAX. (} V_{GS} = 10 \text{ V, } I_D = 18 \text{ A)}$
- Low gate charge
 $Q_G = 16 \text{ nC TYP. (} I_D = 35 \text{ A, } V_{DD} = 16 \text{ V, } V_{GS} = 10 \text{ V)}$
- Built-in gate protection diode
- Surface mount device available

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

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V_{DS}	20	V
Gate to Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	$I_{D(PS)}$	± 35	A
Drain Current(pulse) *	$I_{D(pulse)}$	140	A
Total Power Dissipation ($T_A = 25^\circ\text{C}$)	P_T	1.5	W
Total Power Dissipation ($T_c = 25^\circ\text{C}$)		35	
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

2SK3295

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain Cut-off Current	I_{DSS}	$V_{DS} = 20\text{ V}, V_{GS} = 0\text{ V}$			10	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$			± 10	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{ V}, I_D = 1\text{ mA}$	1.0		2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{ V}, I_D = 18\text{ A}$	7.5			S
Drain to Source On-state Resistance	$R_{DS(on)1}$	$V_{GS} = 10\text{ V}, I_D = 18\text{ A}$		13	18	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS} = 4.5\text{ V}, I_D = 18\text{ A}$		21	27	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}$		720		pF
Output Capacitance	C_{oss}	$V_{GS} = 0\text{ V}$		370		pF
Feedback Capacitance	C_{rss}	$f = 1\text{ MHz}$		180		pF
Turn-on Delay Time	$t_{d(on)}$	$V_{DD} = 10\text{ V}, I_D = 18\text{ A}$		85		ns
Rise Time	t_r	$V_{GS(on)} = 10\text{ V}$		2000		ns
Turn-off Delay Time	$t_{d(off)}$	$R_G = 10\ \Omega$		65		ns
Fall Time	t_f			270		ns
Total Gate Charge	Q_g	$V_{DD} = 16\text{ V}$		16		nC
Gate-Source Charge	Q_{gs}	$V_{GS} = 10\text{ V}$		3.1		nC
Gate-Drain Charge	Q_{gd}	$I_D = 35\text{ A}$		5.2		nC
Diode Forward Voltage	$V_{F(S-D)}$	$I_F = 35\text{ A}, V_{GS} = 0\text{ V}$		1.0		V
Reverse Recovery Time	t_{rr}	$I_F = 35\text{ A}, V_{GS} = 0\text{ V}$		28		ns
Reverse Recovery Charge	Q_{rr}	$di/dt = 100\text{ A}/\mu\text{s}$		14		nC