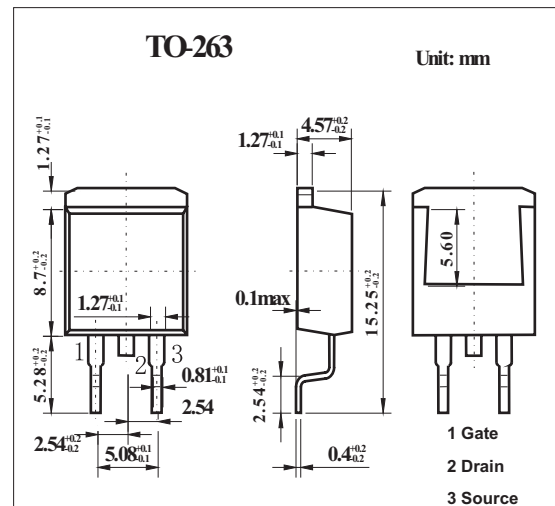


MOS Field Effect Transistor

2SK3295

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V _{DSS}	20	V
Gate to Source Voltage	V _{GSS}	±20	V
Drain Current(DC)	I _{D(DC)}	±35	A
Drain Current(pulse) *	I _{D(pulse)}	140	A
Total Power Dissipation (T _A = 25°C)	P _T	1.5	W
Total Power Dissipation (T _C = 25°C)		35	
Channel Temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* PW ≤ 10μs, D duty cycle ≤ 1%.

2SK3295

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain Cut-off Current	I _{DSS}	V _{DS} = 20 V, V _{GS} = 0 V			10	μA
Gate Leakage Current	I _{GSS}	V _{GS} = ±20 V, V _{DS} = 0 V			±10	μA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = 10 V, I _D = 1 mA	1.0		2.5	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10 V, I _D = 18 A	7.5			S
Drain to Source On-state Resistance	R _{DS(on)1}	V _{GS} = 10 V, I _D = 18 A		13	18	mΩ
	R _{DS(on)2}	V _{GS} = 4.5 V, I _D = 18 A		21	27	mΩ
Input Capacitance	C _{iss}	V _{DS} = 10 V		720		pF
Output Capacitance	C _{oss}	V _{GS} = 0 V		370		pF
Feedback Capacitance	C _{rss}	f = 1 MHz		180		pF
Turn-on Delay Time	t _{d(on)}	V _{DD} = 10 V, I _D = 18 A		85		ns
Rise Time	t _r	V _{GS(on)} = 10 V		2000		ns
Turn-off Delay Time	t _{d(off)}	R _G = 10 Ω		65		ns
Fall Time	t _f			270		ns
Total Gate Charge	Q _g	V _{DD} = 16 V		16		nC
Gate-Source Charge	Q _{gs}	V _{GS} = 10 V		3.1		nC
Gate-Drain Charge	Q _{gd}	I _D = 35 A		5.2		nC
Diode Forward Voltage	V _{F(S-D)}	I _F = 35 A, V _{GS} = 0 V		1.0		V
Reverse Recovery Time	t _{rr}	I _F = 35 A, V _{GS} = 0 V		28		ns
Reverse Recovery Charge	Q _{rr}	di/dt = 100 A/μs		14		nC