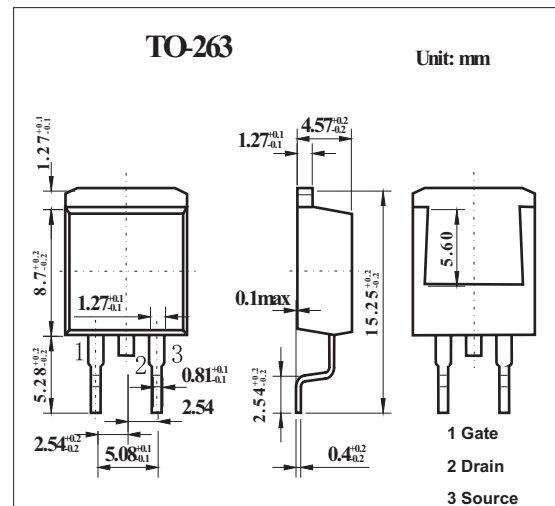


## MOS Field Effect Transistor

## 2SK3295

## ■ Features

- 4.5 V drive available
- Low on-state resistance  
R<sub>DS(on)1</sub> = 18 mΩ MAX. (V<sub>GS</sub> = 10 V, I<sub>D</sub> = 18 A)
- Low gate charge  
Q<sub>G</sub> = 16 nC TYP. (I<sub>D</sub> = 35 A, V<sub>DD</sub> = 16 V, V<sub>GS</sub> = 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 <sub>DSS</sub>	20	V
Gate to Source Voltage	V <sub>GSS</sub>	±20	V
Drain Current(DC)	I <sub>D(DC)</sub>	±35	A
Drain Current(pulse) *	I <sub>D(pulse)</sub>	140	A
Total Power Dissipation (T <sub>A</sub> = 25°C)	P <sub>T</sub>	1.5	W
Total Power Dissipation (T <sub>c</sub> = 25°C)		35	
Channel Temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-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 <sub>DSS</sub>	V <sub>DS</sub> = 20 V, V <sub>GS</sub> = 0 V			10	μA
Gate Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20 V, V <sub>DS</sub> = 0 V			±10	μA
Gate Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 1 mA	1.0		2.5	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 18 A	7.5			S
Drain to Source On-state Resistance	R <sub>DS(on)1</sub>	V <sub>GS</sub> = 10 V, I <sub>D</sub> = 18 A		13	18	mΩ
	R <sub>DS(on)2</sub>	V <sub>GS</sub> = 4.5 V, I <sub>D</sub> = 18 A		21	27	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 10 V		720		pF
Output Capacitance	C <sub>oss</sub>	V <sub>GS</sub> = 0 V		370		pF
Feedback Capacitance	C <sub>rss</sub>	f = 1 MHz		180		pF
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = 10 V, I <sub>D</sub> = 18 A		85		ns
Rise Time	t <sub>r</sub>	V <sub>GS(on)</sub> = 10 V		2000		ns
Turn-off Delay Time	t <sub>d(off)</sub>	R <sub>G</sub> = 10 Ω		65		ns
Fall Time	t <sub>f</sub>			270		ns
Total Gate Charge	Q <sub>g</sub>	V <sub>DD</sub> = 16 V		16		nC
Gate-Source Charge	Q <sub>gs</sub>	V <sub>GS</sub> = 10 V		3.1		nC
Gate-Drain Charge	Q <sub>gd</sub>	I <sub>D</sub> = 35 A		5.2		nC
Diode Forward Voltage	V <sub>F(S-D)</sub>	I <sub>F</sub> = 35 A, V <sub>GS</sub> = 0 V		1.0		V
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 35 A, V <sub>GS</sub> = 0 V		28		ns
Reverse Recovery Charge	Q <sub>rr</sub>	di/dt = 100 A/μs		14		nC