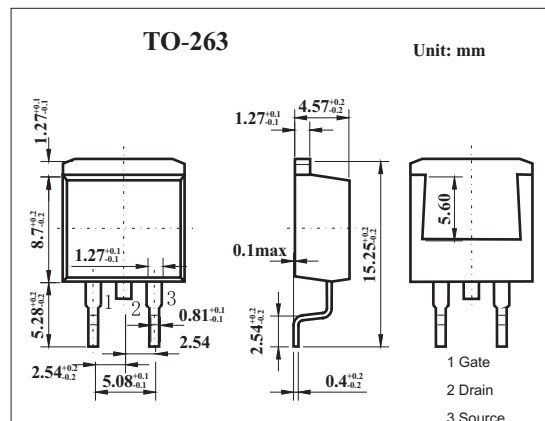


MOS Field Effect Transistor

2SK3296

■ Features

- 4.5 V drive available
- Low on-state resistance
 $R_{DS(on)1} = 12\text{m}\Omega$ MAX. ($V_{GS} = 10\text{ V}$, $I_D = 18\text{ A}$)
- Low gate charge
 $Q_G = 30\text{ nC}$ 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	I_D	± 35	A
	I_{DP}^*	± 140	A
Power dissipation $T_A = 25^\circ\text{C}$ $T_C = 25^\circ\text{C}$	P_D	1.5	W
		40	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS} = 20\text{V}$, $V_{GS} = 0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS} = \pm 20\text{V}$, $V_{DS} = 0$			± 10	μA
Gate cutoff voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	1.0		2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 18\text{A}$	9.0			S
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$, $I_D = 18\text{A}$		8.5	12	$\text{m}\Omega$
		$V_{GS} = 4.5\text{V}$, $I_D = 18\text{A}$		12	19	$\text{m}\Omega$
Input capacitance	C_{iss}	$V_{DS} = 10\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$		1300		pF
Output capacitance	C_{oss}			570		pF
Reverse transfer capacitance	C_{rss}			300		pF
Turn-on delay time	t_{on}	$I_D = 18\text{A}$, $V_{GS(on)} = 10\text{V}$, $R_G = 10\Omega$, $V_{DD} = 10\text{V}$		70		ns
Rise time	t_r			1220		ns
Turn-off delay time	t_{off}			100		ns
Fall time	t_f			180		ns