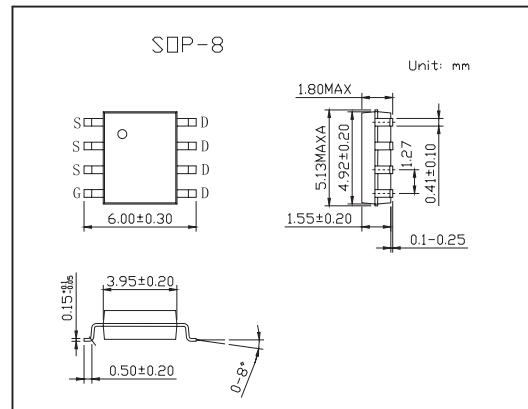


Load Switching Applications KSS133

■ Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 2.5V drive.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V _{DSS}	-20	V
Gate-to-Source Voltage	V _{GSS}	± 10	V
Drain Current(DC)	I _D	-8	A
Drain Current(pulse) *1	I _{DP}	-52	A
Allowable Power Dissipation *2	P _D	1.8	W
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

*1 PW ≤ 10 μs, duty cycle ≤ 1%

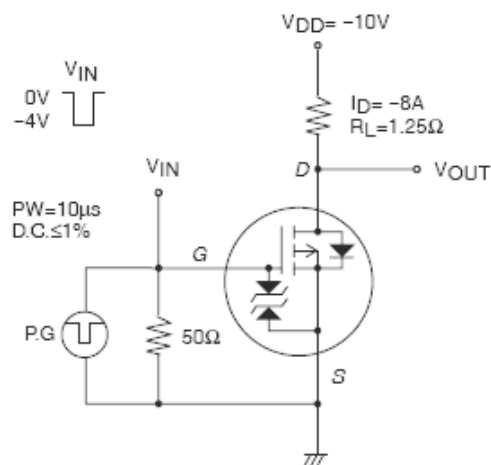
*2 Mounted on a ceramic board (1200mm²X0.8mm)

KSS133

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$, $V_{GS} = 0$	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20\text{V}$, $V_{GS} = 0\text{V}$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8\text{V}$, $V_{DS} = 0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}$, $I_D = -1\text{mA}$	-0.4		-1.4	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}$, $I_D = -8\text{A}$	14.7	21		S
Drain to Source On-state Resistance	$R_{DS(on)1}$	$V_{GS} = -4\text{V}$, $I_D = -8\text{A}$		18	24	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS} = -2.5\text{V}$, $I_D = -2\text{A}$		25	35	
Input Capacitance	C_{iss}	$V_{DS} = -10\text{V}$, $f = 1\text{MHz}$		2900		pF
Output Capacitance	C_{oss}			570		pF
Reverse Transfer Capacitance	C_{rss}			370		pF
Turn-on Delay Time	$t_{d(on)}$	See Specified Test Circuit		27		ns
Rise Time	t_r			250		ns
Turn-off Delay Time	$t_{d(off)}$			130		ns
Fall Time	t_f			180		ns
Total Gate Charge	Q_g	$V_{DS} = -10\text{V}$, $V_{GS} = -10\text{V}$, $I_D = -8\text{A}$		65		nC
Gate-to-Source Charge	Q_{gs}			4		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			8		nC
Diode Forward Voltage	V_{SD}	$I_S = -8\text{A}$, $V_{GS} = 0\text{V}$		-0.8	-1.5	V

■ Switching Time Test Circuit



■ Marking

Marking	S133
---------	------