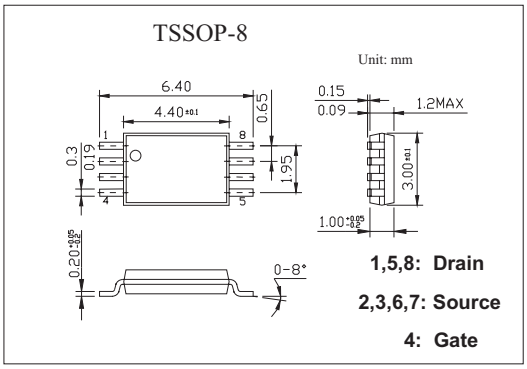
Load Switching Applications

KTS1012



■ Features

- Low ON resistance.
- 4.0V drive.
- Mount height 1.1mm.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V_{DSS}	-30	V
Gate-to-Source Voltage	V_{GSS}	±20	V
Drain Current(DC)	I_D	-6	A
Drain Current(pulse) *1	I_{DP}	-32	A
Allowable Power Dissipation *2	P_D	1.3	W
Channel Temperature	T_{ch}	150	℃
Storage Temperature	T_{stg}	-55 to +150	℃

*1 PW≤10μs, duty cycle≤1%

*2 Mounted on a ceramic board ($1000mm^2$X0.8mm)

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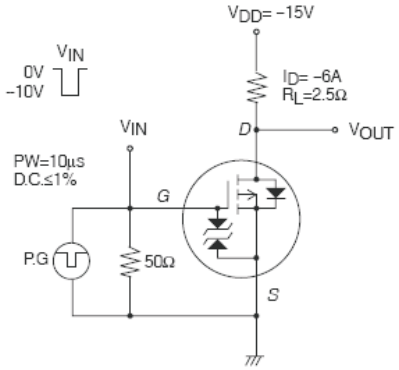
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=-1mA, V_{GS}=0	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -30 V, V_{GS} = 0 V			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS} = ± 16 V, V_{DS} = 0 V			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS} = -10 V, I_D = -1 mA			-2.4	V
Forward Transfer Admittance	$\|Y_{fs}\|$	V_{DS} = -10 V, I_D = -6 A	8.7	12		S
Drain to Source On-state Resistance	$R_{DS(on)1}$	V_{GS} = -10 V, I_D = -6 A		21	28	mΩ
	$R_{DS(on)2}$	V_{GS} = -4.5 V, I_D = -4 A		33	47	mΩ
	$R_{DS(on)3}$	V_{GS} = -4 V, I_D = -4 A		37	52	mΩ
Input Capacitance	C_{iss}	V_{DS} = -10 V,f = 1 MHz		1700		pF
Output Capacitance	C_{oss}			380		pF
Reverse Transfer Capacitance	C_{rss}			240		pF
Turn-on Delay Time	$t_{d(on)}$	See Specified Test Circuit		15		ns
Rise Time	t_r			130		ns
Turn-off Delay Time	$t_{d(off)}$			110		ns
Fall Time	t_f			85		ns
Total Gate Charge	Q_g	V_{DS}= -10 V		32		nC
Gate-to-Source "Miller" Charge	Q_{gs}	V_{GS} = -10 V		4.5		nC
Gate-Drain Charge	Q_{gd}	I_D = -6 A		5		nC
Diode Forward Voltage	V_{SD}	I_S = -6 A, V_{GS} = 0 V		-0.79	-1.5	V

■ Switching Time Test Circuit



■ Marking

Marking	S1012