

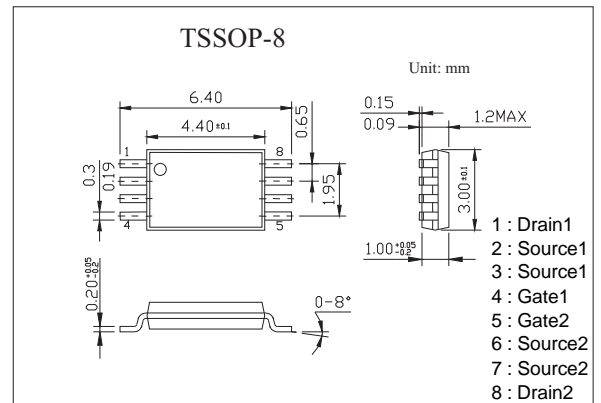
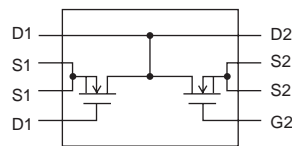
Dual N-Channel Enhancement Mode MOSFET

5N20V

Features

$R_{DS(ON)}$ 40m Ω @ $V_{GS}=4.5V$

$R_{DS(ON)}$ 45m Ω @ $V_{GS}=2.7V$



Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	20	V	
Gate-Source Voltage	V_{GS}	± 12	V	
Drain-Current	-Continuous	I_D	5	A
	-Pulsed (NOTE 1)	I_{DM}	20	A
Power Dissipation (NOTE 2)	P_D	1.5	W	
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	83	$^\circ C/W$	
Operating Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 150	$^\circ C$	

Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. When Mounted on minimum recommended footprint.

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Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	V _{GS} =0V, I _D =1mA	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =18V, V _{GS} =0V			1	μA
Gate-Body Leakage	I _{GSS}	V _{GS} =±12V, V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.6			V
Drain- Source on-state Resistance	R _{DS(ON)}	V _{GS} =4.5V, I _D =2.5A		30	40	mΩ
		V _{GS} =2.7V, I _D =2.5A		37	45	mΩ
Input Capacitance	C _{iss}	V _{DS} = 15V, V _{GS} = 0V, f = 1.0MHZ		460		pF
Output Capacitance	C _{oss}			200		pF
Reverse Transfer Capacitance	C _{rss}			50		pF
Turn-On Delay Time	t _{D(on)}	V _{DD} =10V, I _D =2.5A, V _{GS} =4.5V, R _{GEN} =4.7Ω		7		ns
Rise Time	t _r			33		ns
Turn-Off Delay Time	t _{D(off)}			27		ns
Fall Time	t _f			10		ns
Total Gate Charge	Q _g	V _{DS} = 10V, I _D = 4.5A, V _{GS} = 4.5V		8.5	11.5	nC
Gate-Source Charge	Q _{gs}			1.8		nC
Gate-Drain Charge	Q _{gd}			2.4		nC
Diode Forward Voltage	V _{SD}	I _S =5A, V _{GS} =0			1.2	V
Diode Forward Current	I _S				5	A