

### INTERFACE AND SWITCHING APPLICATION.

#### FEATURES

- ESD Protected 2000V.
- High density cell design for low  $R_{DS(ON)}$ .
- Voltage controlled small signal switch.
- Rugged and reliable.
- High saturation current capability.

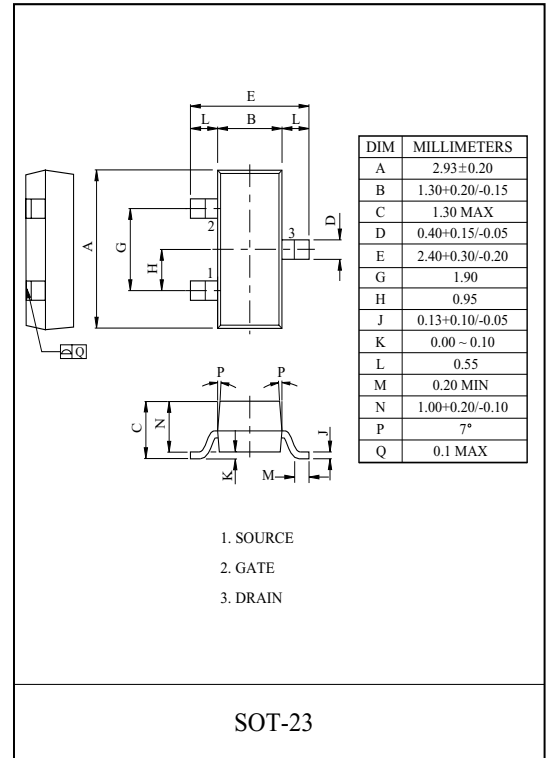
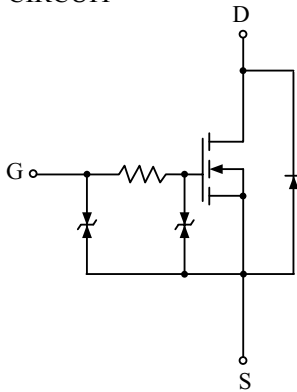
#### MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		$V_{DSS}$	60	V
Gate-Source Voltage		$V_{GSS}$	$\pm 20$	V
Drain Current	Continuous	$I_D$	300	mA
	Pulsed (Note 1)	$I_{DP}$	1200	
Drain Power Dissipation (Note 2)		$P_D$	350	mW
Junction Temperature		$T_j$	150	
Storage Temperature Range		$T_{stg}$	-55 150	

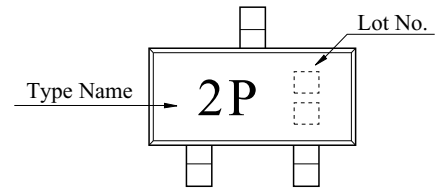
Note 1) Pulse Width 10 $\mu$ s, Duty Cycle 1%

Note 2) Package mounted on 99% Alumina 10 x 8 x 0.6mm

#### EQUIVALENT CIRCUIT



#### Marking



#### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=10 \mu A$	60	-	-	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0V$	-	-	1	$\mu A$
Gate-Body Leakage, Forward	$I_{GSSF}$	$V_{GS}=20V, V_{DS}=0V$	-	-	10	$\mu A$
Gate-Body Leakage, Reverse	$I_{GSSR}$	$V_{GS}=-20V, V_{DS}=0V$	-	-	-10	$\mu A$
ESD-Capability*	-	C=100pF, R=1.5K Both forward and reverse direction 3 pulse	2000	-	-	V

\*Failure criterion :  $I_{DSS} > 1 \mu A$  at  $V_{DS}=60V$ ,  $I_{GSSF} > 10 \mu A$  at  $V_{GS}=20V$ ,  $I_{GSSR} > -10 \mu A$  at  $V_{GS}=-20V$ .

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## ELECTRICAL CHARACTERISTICS (Ta=25 ) ON CHARACTERISTICS (Note 3)

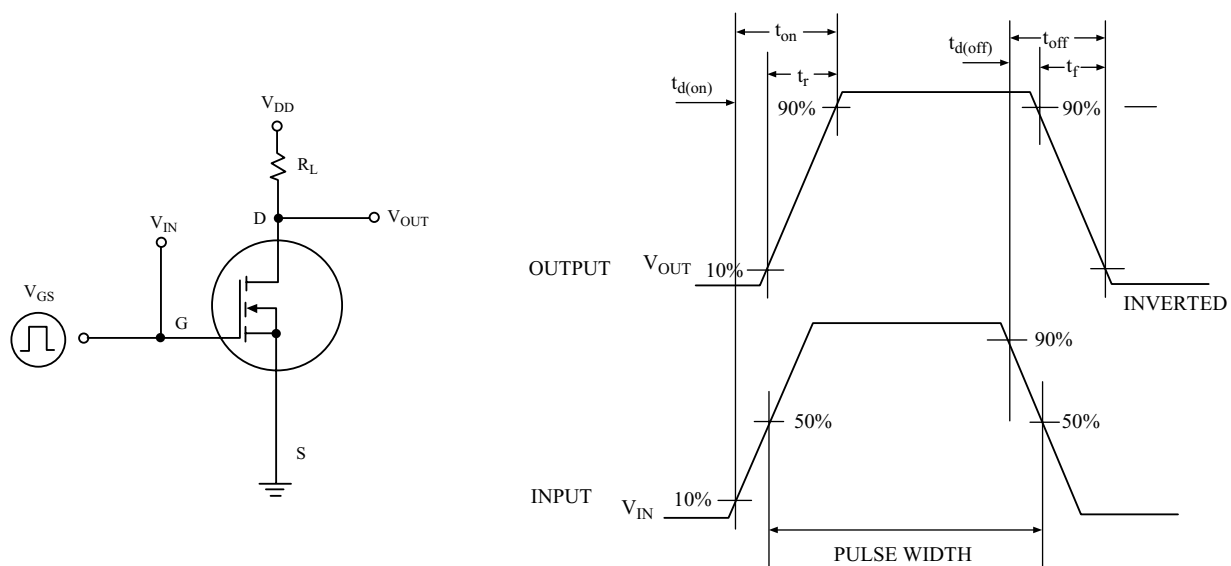
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Threshold Voltage	$V_{th}$	$V_{DS}=V_{GS}, I_D=250 \mu A$	1.1	-	2.35	V
Drain-Source ON Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=500mA$	-	-	2.3	
		$V_{GS}=5V, I_D=50mA$	-	1.7	2.7	
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V, I_S=200mA$ (Note 1)	-	-	1.15	V

Note 3) Pulse Test : Pulse Width 80 $\mu$ s, Duty Cycle 1%

## DYNAMIC CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Input Capacitance	$C_{iss}$	$V_{DS}=25V, V_{GS}=0V, f=1MHz$	-	18.0	-	pF	
Reverse Transfer Capacitance	$C_{rss}$		-	3.0	-		
Output Capacitance	$C_{oss}$		-	7.0	-		
Switching Time	Turn-On Time	$t_{on}$	$V_{DD}=30V, R_L=155 \Omega, I_D=190mA,$ $V_{GS}=10V$	-	15	-	nS
	Turn-Off Time	$t_{off}$		-	40	-	

## SWITCHING TIME TEST CIRCUIT



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