

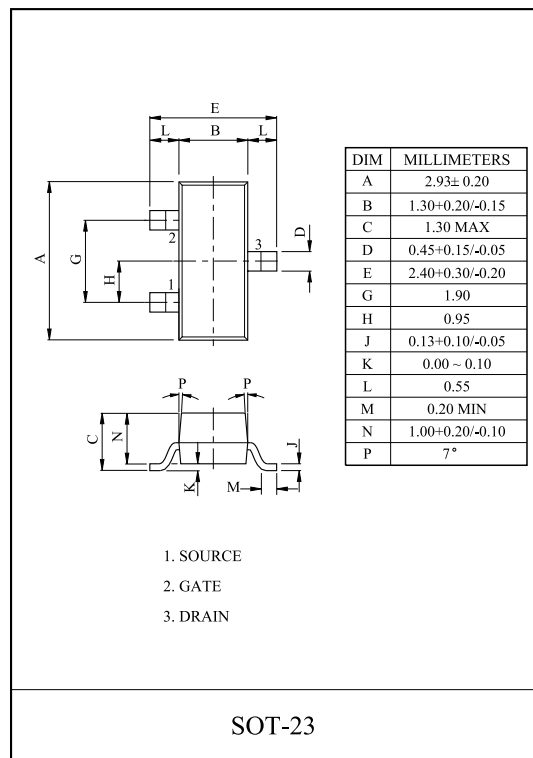
INTERFACE AND SWITCHING APPLICATION.

FEATURES

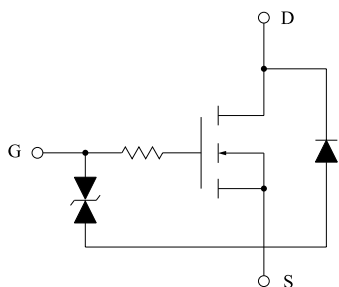
- High density cell design for low $R_{DS(ON)}$.
- Voltage controolled small signal switch.
- Rugged and reliable.
- High saturation current capablity.

MAXIMUM RATING ($T_a=25^{\circ}\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSS}	60	V
Drain-Gate Voltage ($R_{GS} \leq 1 \text{ M}\Omega$)		V_{DGR}	60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	Continuous	I_D	115	mA
	Pulsed	I_{DP}	800	
Drain Power Dissipation		P_D	200	mW
Junction Temperature		T_j	150	$^{\circ}\text{C}$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^{\circ}\text{C}$

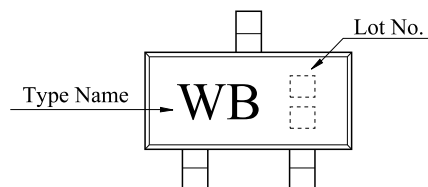


EQUIVALENT CIRCUIT



THIS TRANSISTOR IS ELECTROSTATIC SENSITIVE DEVICE.
PLEASE HANDLE WITH CAUTION.

Marking



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

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	μA
Gate-Body Leakage, Forward	I_{GSSF}	$V_{GS}=20V, V_{DS}=0V$	-	-	1	μA
Gate-Body Leakage, Reverse	I_{GSSR}	$V_{GS}=-20V, V_{DS}=0V$	-	-	-1	μA

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ELECTRICAL CHARACTERISTICS (Ta=25 °C) ON CHARACTERISTICS (Note 1)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Threshold Voltage	V_{th}	$V_{DS}=V_{GS}$, $I_D=250\mu A$	1	2.1	2.5	V
Drain-Source ON Resistance	$R_{DS(ON)}$	$V_{GS}=10V$, $I_D=500mA$	-	1.8	5	Ω
		$V_{GS}=5V$, $I_D=50mA$	-	-	5	
Drain-Source ON Voltage	$V_{DS(ON)}$	$V_{GS}=10V$, $I_D=500mA$	-	0.6	1.0	V
		$V_{GS}=5V$, $I_D=50mA$	-	0.09	0.2	
On State Drain Current	$I_{D(ON)}$	$V_{GS}=10V$, $V_{DS} \geq 2 V_{DS(ON)}$	500	2700	-	mA
Forward Transconductance	g_{FS}	$V_{DS}=2V_{DS(ON)}$, $I_D=200mA$	80	320	-	mS

Note 1) Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2.0\%$

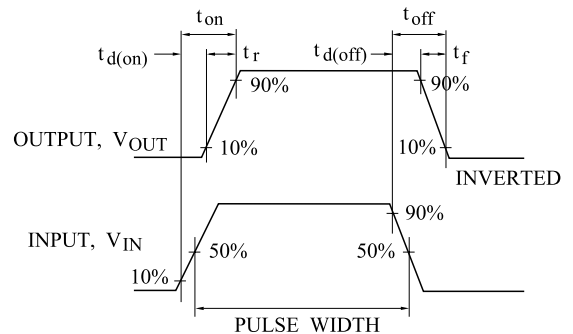
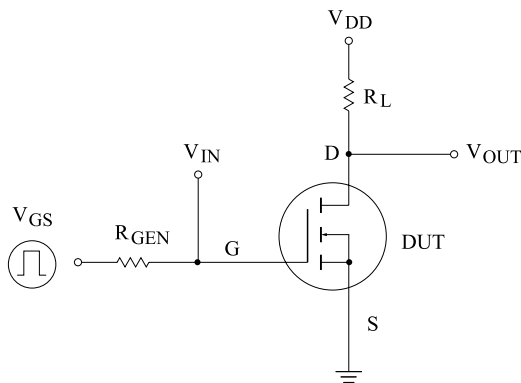
DYNAMIC CHARACTERISTICS

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Capacitance		C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1MHz	-	20	50	pF
Reverse Transfer Capacitance		C _{rss}		-	4	5	
Output Capacitance		C _{oss}		-	11	25	
Switching Time	Turn-On Time	t _{on}	V _{DD} =30V, R _L =150 Ω , I _D =200mA,	-	-	20	nS
	Turn-Off Time	t _{off}	V _{GS} =10V, R _{GEN} =25 Ω	-	-	20	

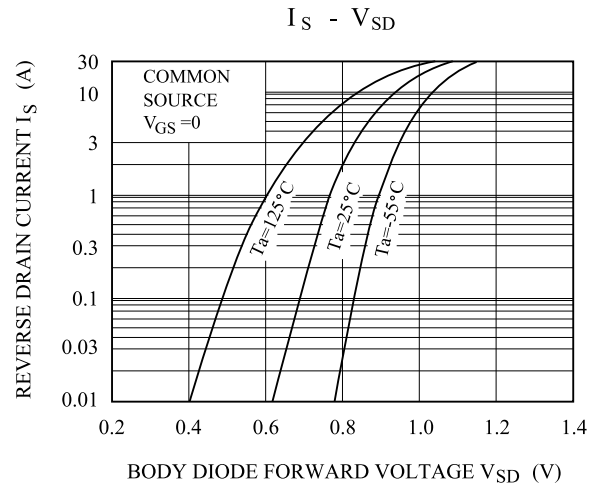
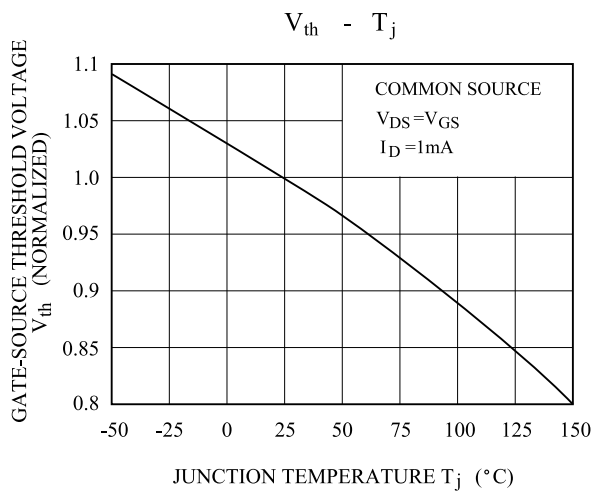
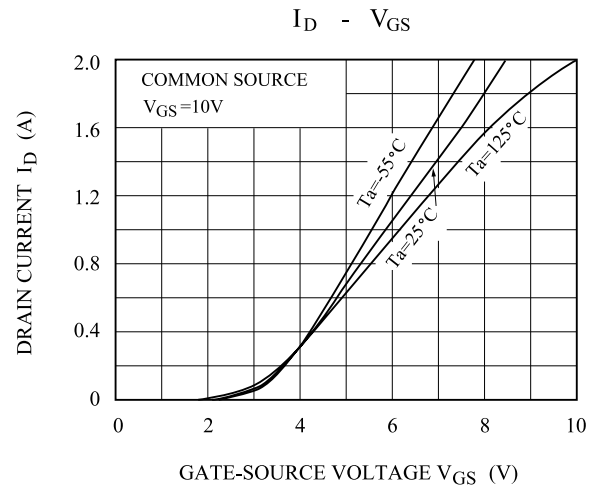
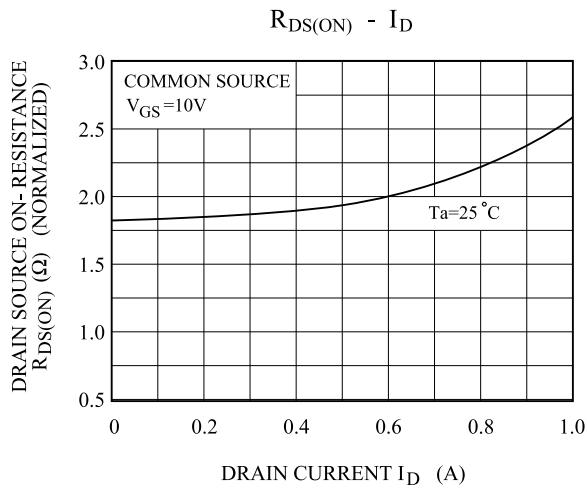
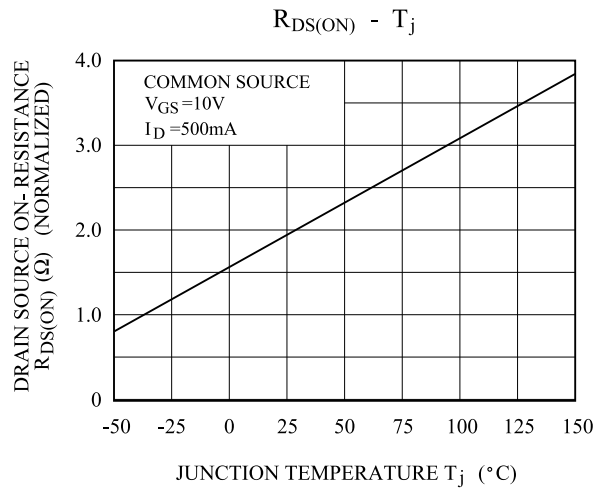
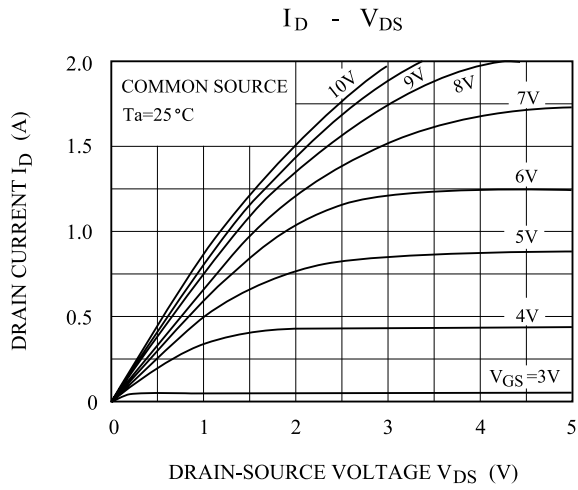
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RAINGS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Maximum Continuous Drain-Source Diode Forward Current	I_S	-	-	-	115	mA
Maximum Pulsed Drain-Source Diode Forward Current	I_{SM}	-	-	-	800	mA
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$, $I_S=115mA$ (Note1)	-	0.88	1.5	V

SWITCHING TIME TEST CIRCUIT

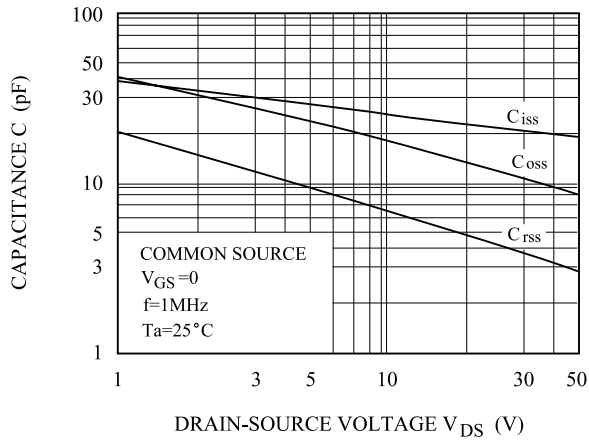


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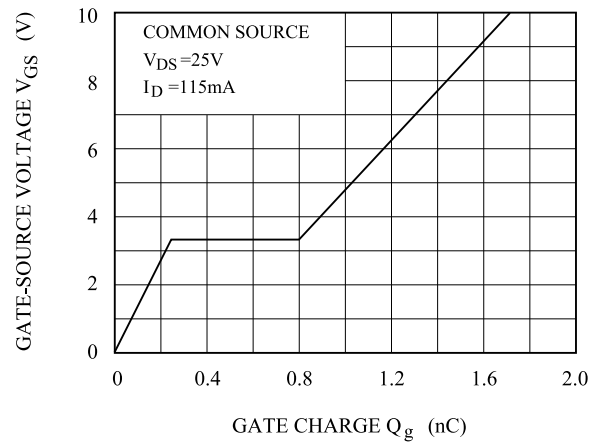


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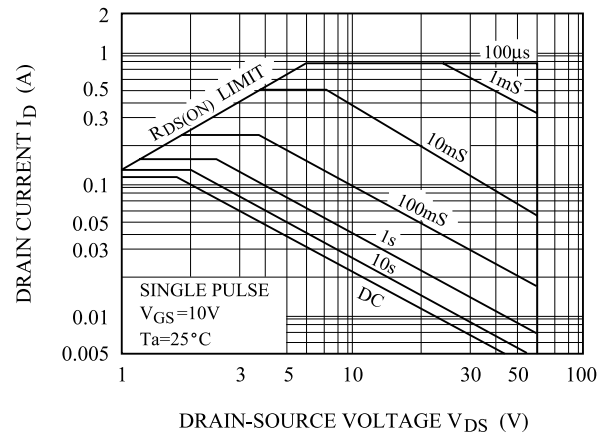
C - V_{DS}



V_{GS} - Q_g



I_D - V_{DS}



P_D - T_a

