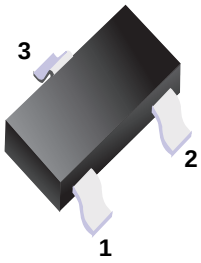
N-Channel MOSFET

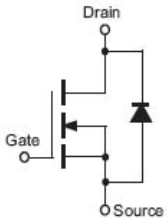


1.Gate
2.Source
3.Drain

■ Features

- $V_{DS\ (V)}$ = 60V
- I_D = 115mA
- $R_{DS(ON)}$ ＜ 5Ω (V_{GS} = 10V)
- $R_{DS(ON)}$ ＜ 7Ω (V_{GS} = 5V)

■ Simplified outline(SOT-523)



■ Absolute Maximum Ratings Ta = 25℃

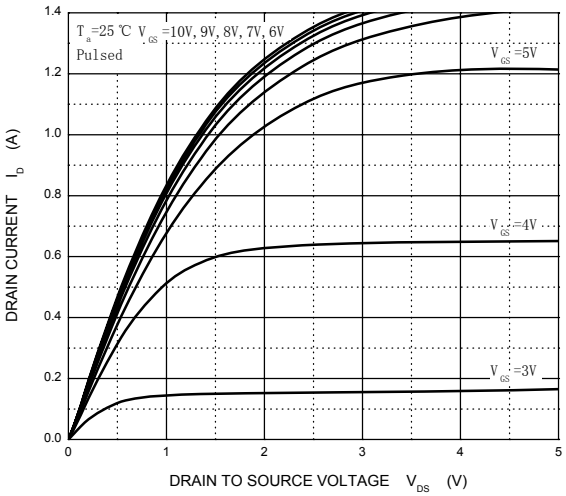
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current	I_D	115	mA
Power Dissipation	P_D	150	mW
Thermal Resistance.Junction- to-Ambient	R_{thJA}	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

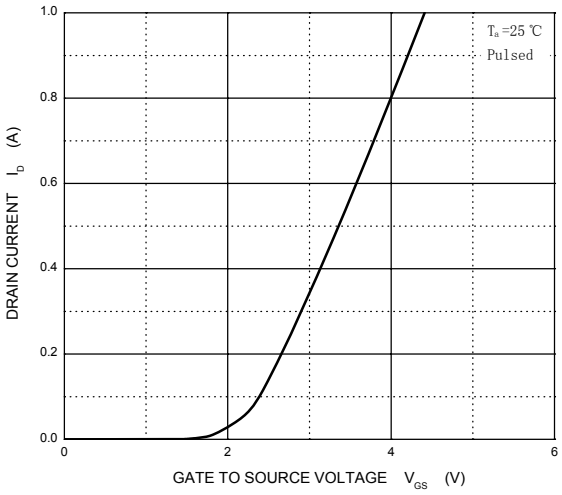
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=250μA, V_{GS}=0V	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			80	nA
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±80	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} , I_D=250μA	1		2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=500mA			5	Ω
		V_{GS}=5V, I_D=50mA			7	
On State Drain Current	$I_{D(ON)}$	V_{GS}=10V, V_{DS}=7V	500			mA
Forward Transconductance	g_{FS}	V_{DS}=10V, I_D=0.2A	80			mS
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=25V, f=1MHz			50	pF
Output Capacitance	C_{oss}				25	
Reverse Transfer Capacitance	C_{rss}				5	
Turn-On DelayTime	$t_{d(on)}$	V_{DD} = 25V, I_D = 0.5A, V_{GEN}= 10V R_L = 50Ω, R_{GEN} = 25Ω			20	ns
Turn-Off DelayTime	$t_{d(off)}$				40	
Drain-source on-voltage	$V_{DS(on)}$	V_{GS}=10V, I_D=500mA			3.75	V
		V_{GS}=5V, I_D=50mA			0.375	
Diode Forward Voltage	V_{SD}	Is=115mA, V_{GS}=0 V	0.55		1.2	

■ Typical Characterisitics

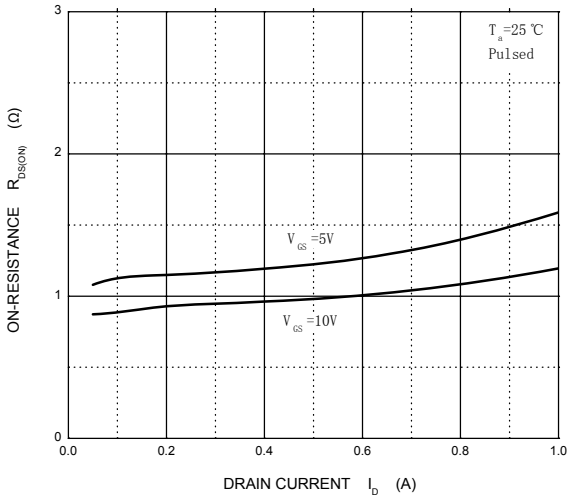
Output Characteristics



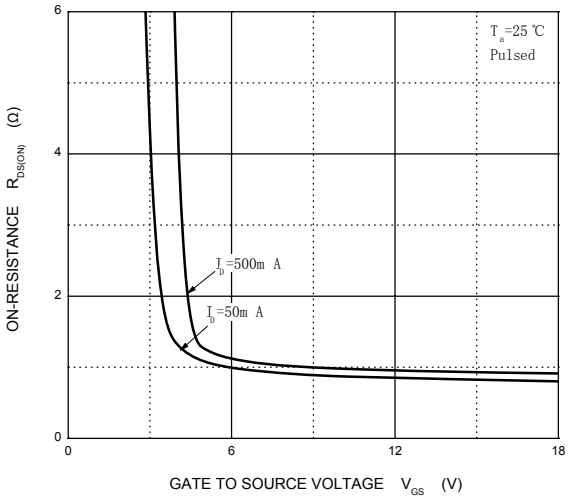
Transfer Characteristics



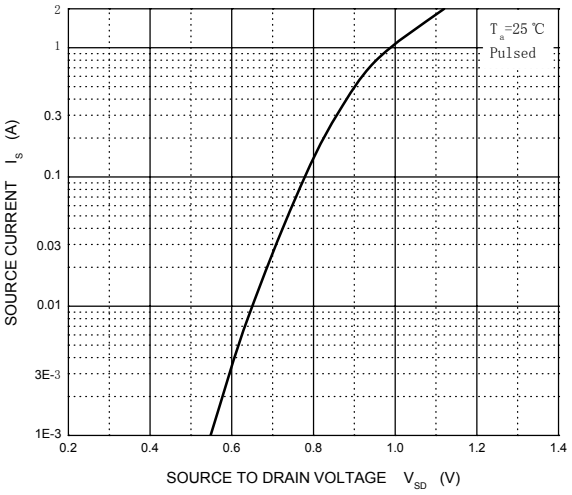
RDS(ON) —— ID



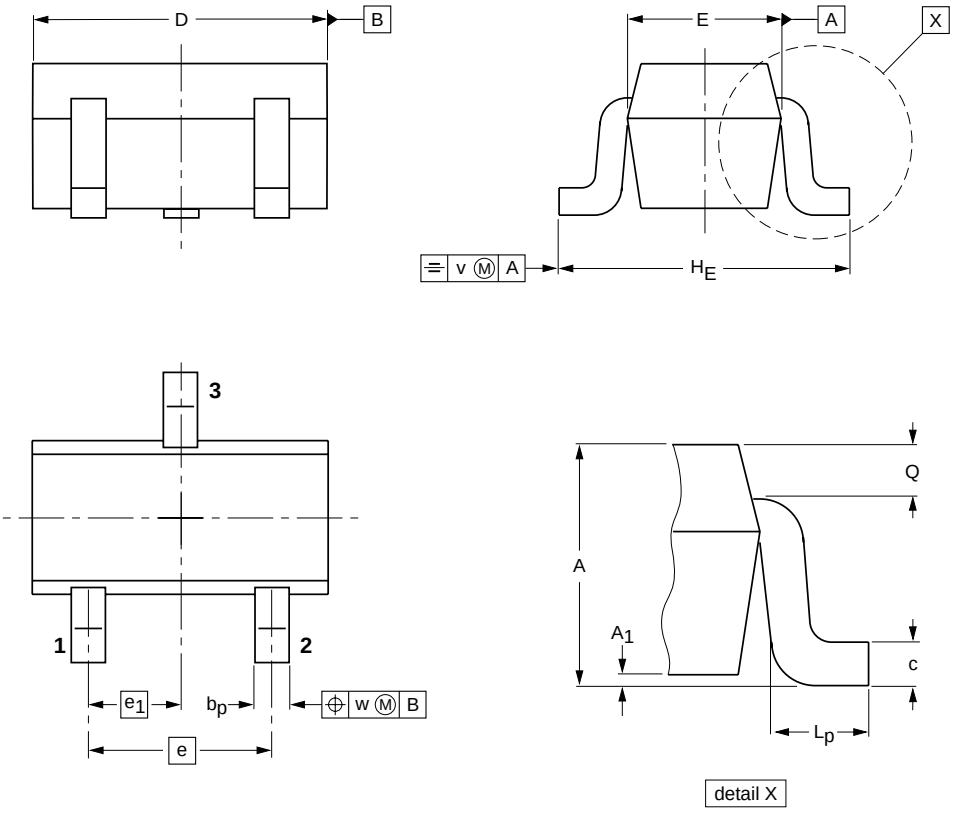
RDS(ON) —— VGS



IS —— VSD



■ SOT-523



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	0.95 0.60	0.1	0.30 0.15	0.25 0.10	1.8 1.4	0.9 0.7	1	0.5	1.75 1.45	0.45 0.15	0.23 0.13	0.2	0.2