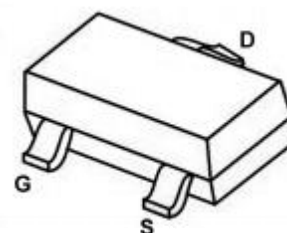




FEATURE

- $R_{DS(ON)} \leq 0.38\Omega$ (0.25 Ω Typ.)
@ $V_{GS}=4.5V$
- $R_{DS(ON)} \leq 0.45\Omega$ (0.35 Ω Typ.)
@ $V_{GS}=2.5V$
- $R_{DS(ON)} \leq 0.8\Omega$ (0.4 Ω Typ.)
@ $V_{GS}=1.8V$

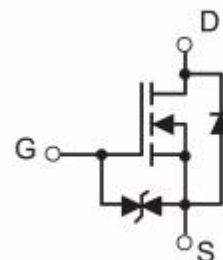
SOT-523



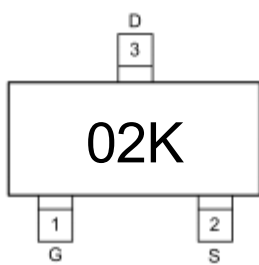
APPLICATION

- Load/Power Switching
- Interfacing Switching

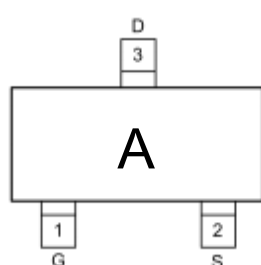
CIRCUIT DIAGRAM



MARKING



02K =Device Code



A =Device Code

**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

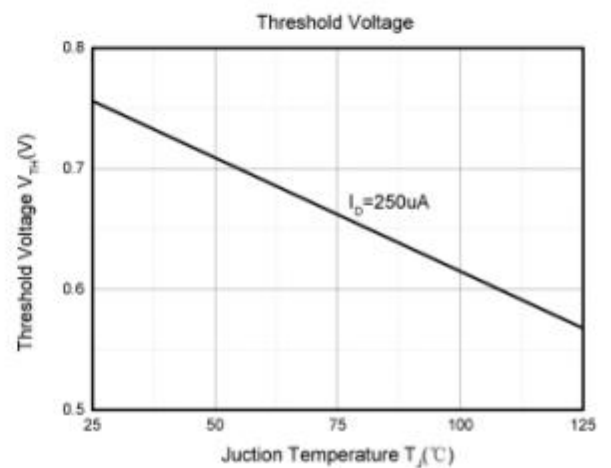
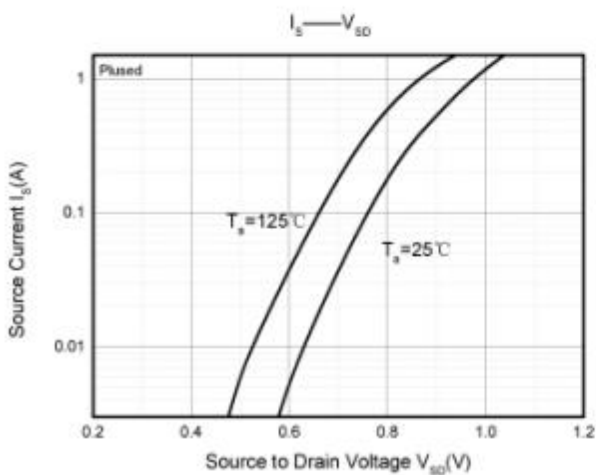
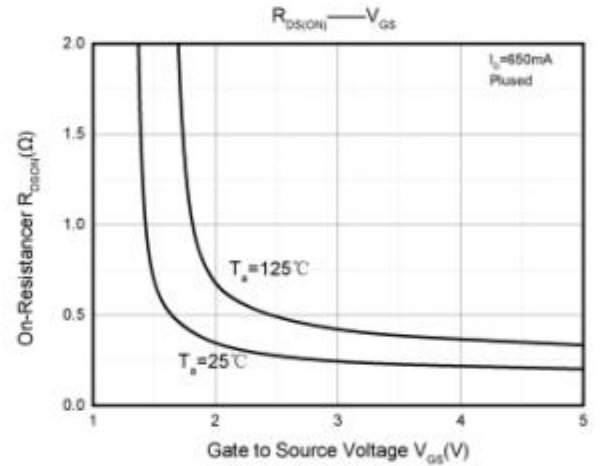
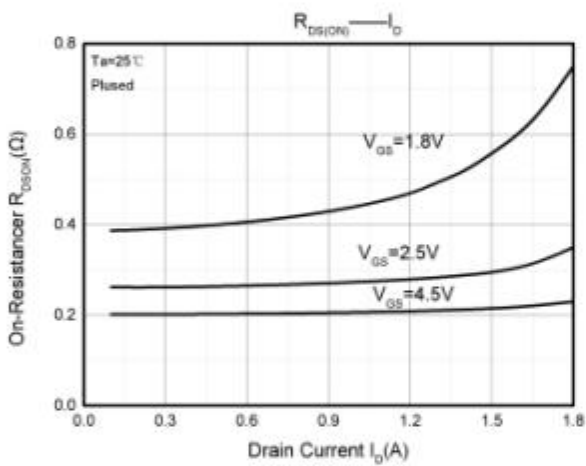
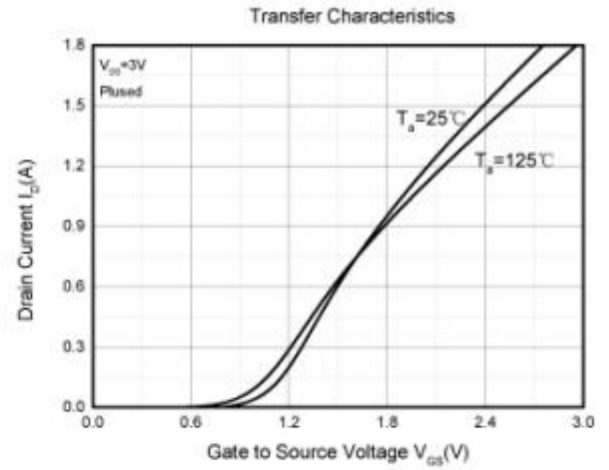
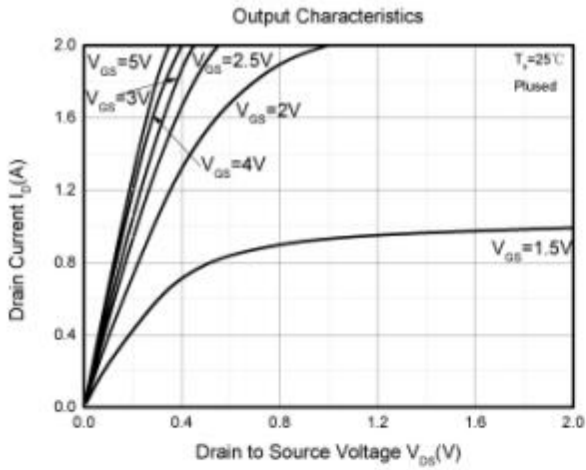
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	0.75	A
Pulsed Drain Current	I_{DM}	1.8	A
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	C/W
Junction Temperature	T_J	150	C
Storage Temperature	T_{STG}	-55~ +150	C

Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 8V, V_{DS} = 0V$			± 10	μA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.3	0.65	1	V
Drain-source on-resistance	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.5A$		0.25	0.38	Ω
		$V_{GS} = 2.5V, I_D = 0.4A$		0.35	0.45	
		$V_{GS} = 1.8V, I_D = 0.1A$		0.4	0.8	
Forward Transconductance	g_{FS}	$V_{DS} = 10V, I_D = 0.4A$	0.8	-	-	S
Dynamic characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 16V, V_{GS} = 0V, f = 1MHz$		79	120	pF
Output Capacitance	C_{oss}			13	20	
Reverse Transfer Capacitance	C_{rss}			9	15	
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V, I_D = 500mA, R_{GEN} = 10\Omega$		6.7		ns
Turn-on rise time	t_r			4.8		
Turn-off delay time	$t_{d(off)}$			17.3		
Turn-off fall time	t_f			7.4		
Source-Drain Diode characteristics						
Body Diode Voltage	V_{SD}	$I_S = 0.5A, V_{GS} = 0V$		0.7	1.3	V

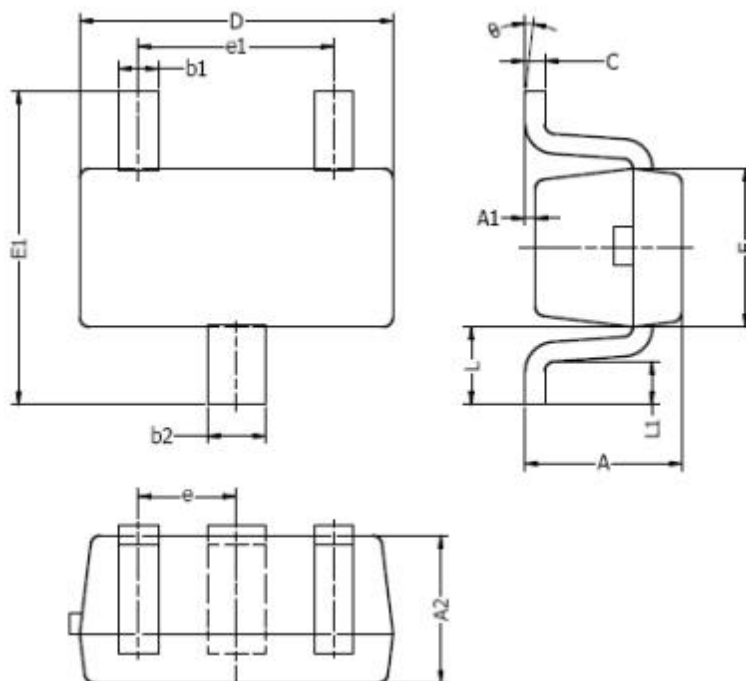


Typical Characteristics





SOT-523 Package Information



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.90	0.028	0.035
A1	0.00	0.10	0.000	0.004
A2	0.70	0.80	0.028	0.031
b1	0.15	0.25	0.006	0.010
b2	0.25	0.35	0.010	0.014
c	0.10	0.20	0.004	0.008
D	1.50	1.70	0.059	0.067
E	0.70	0.90	0.028	0.035
E1	1.45	1.75	0.057	0.069
e	0.50 TYP.		0.020 TYP.	
e1	0.90	1.10	0.035	0.043
L	0.40 REF.		0.016 REF.	
L1	0.10	0.30	0.004	0.012
θ	0°	8°	0°	8°