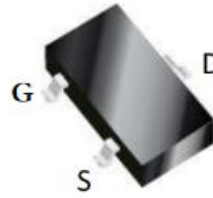
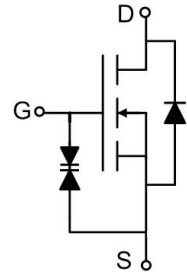


Features

- ◆ 60V, 0.32A, $R_{DS(ON)}$ (Typ.) = $2.2\Omega @ V_{GS} = 10V$.
- ◆ Very Low Leakage Current In Off Condition.
- ◆ ESD Protected 2KV HBM.



SOT-23



Application

- ◆ Power switching application
- ◆ Hard switched and high frequency circuits

Absolute Maximum Ratings $T_c = 25^\circ \text{C}$ unless otherwise noted

Symbol	Parameter	Limit	Unit
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	
I_D	Drain Current-Continuous, $T_A = 25^\circ\text{C}$	320	mA
I_{DM}	Drain Current-Pulsed ^a	2000	
P_D	Maximum Power Dissipation @ $T_A = 25^\circ\text{C}$	350	mW
T_{STG}	Store Temperature Range	-55 to 150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JA}$	Thermal Resistance Junction-Ambient Max ^c	357	$^\circ\text{C}/\text{W}$

Electrical Characteristics $T_J = 25^\circ \text{C}$ unless otherwise noted

Off Characteristics

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = 250\mu\text{A}$	60	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 60V, V_{GS} = 0V$	-	-	1	μA
I_{GSS}	Forward Gate Body Leakage Current	$V_{DS} = 0V, V_{GS} = \pm 20V$	-	-	± 10	μA



MU6001T

N-Channel Enhancement Mode MOSFET

■ On Characteristics

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	1.5	2.1	V
$R_{DS(on)}$	Static Drain-Source On-Resistance ^d	$V_{GS} = 5V, I_D = 50mA$	-	-	2.8	Ω
		$V_{GS} = 4.5V, I_D = 200mA$	-	-	3.2	
		$V_{GS} = 10V, I_D = 500mA$	-	-	3.0	
gfs	Forward Transconductance	$V_{DS} = 15V, I_D = 250mA$	300	-	-	mS

■ Dynamic Characteristics

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Ciss	Input Capacitance	$V_{DS} = 25V,$ $V_{GS} = 0V,$ $f = 1.0MHz$	-	-	35	μF
Coss	Output Capacitance		-	-	12	
Crss	Reverse Transfer Capacitance		-	-	7	

■ On Characteristics

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
$t_{d(on)}$	Turn-On Delay Time	$V_{DD} = 30V, R_L = 150\Omega,$ $I_D = 200mA, R_G = 10\Omega,$ $V_{GS} = 10V$	-	6	-	ns
$t_{d(off)}$	Turn-Off Delay Time		-	13	-	
Qg	Total Gate Charge	$V_{DS} = 15V, I_D = 200mA,$ $V_{GS} = 5V$	-	-	0.8	nC

■ Drain-Source Diode Characteristics

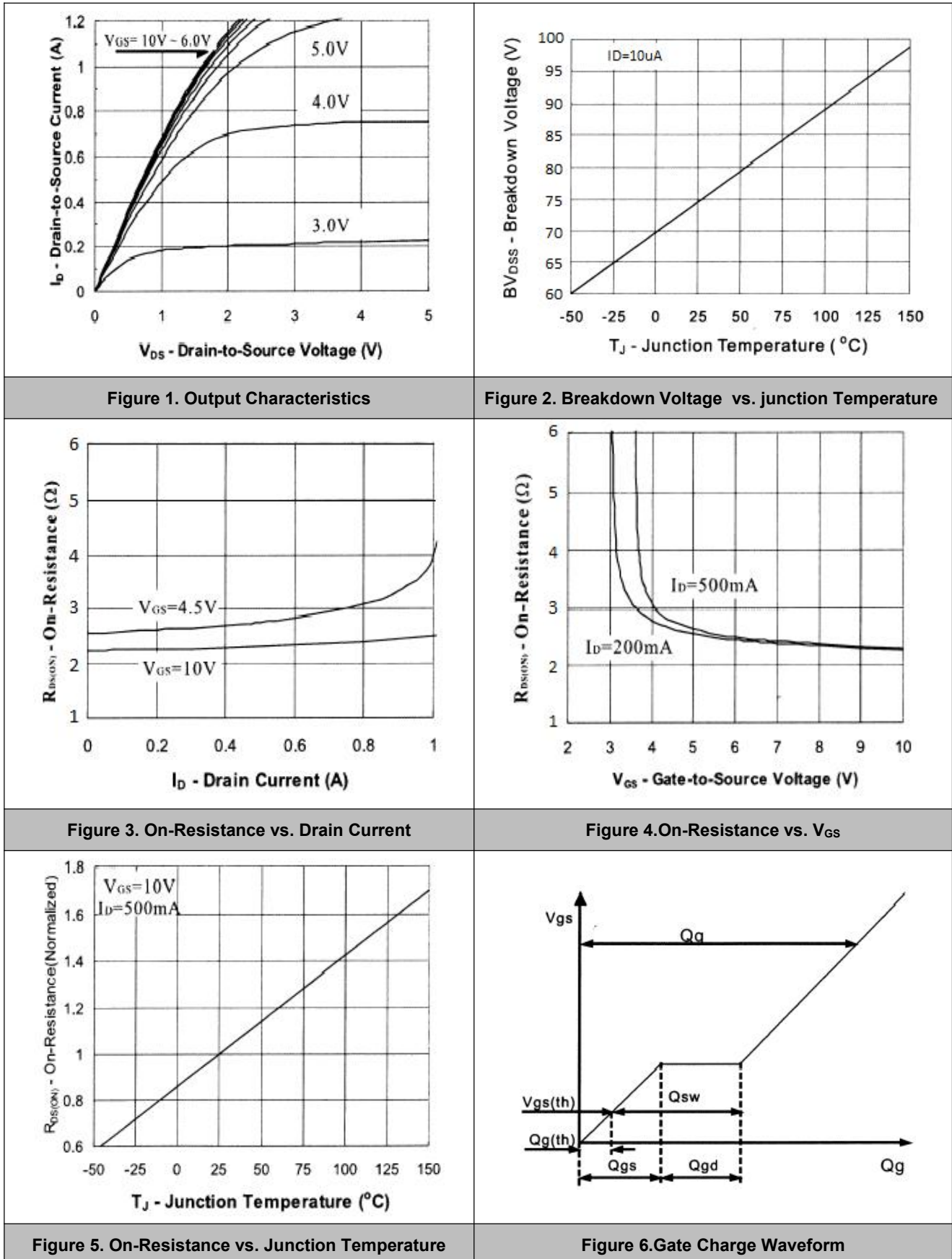
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS} = 0V, I_{SD} = 1A$	-	0.82	1.1	V
I_S	Continuous Source Current		-	-	300	mA

Notes:

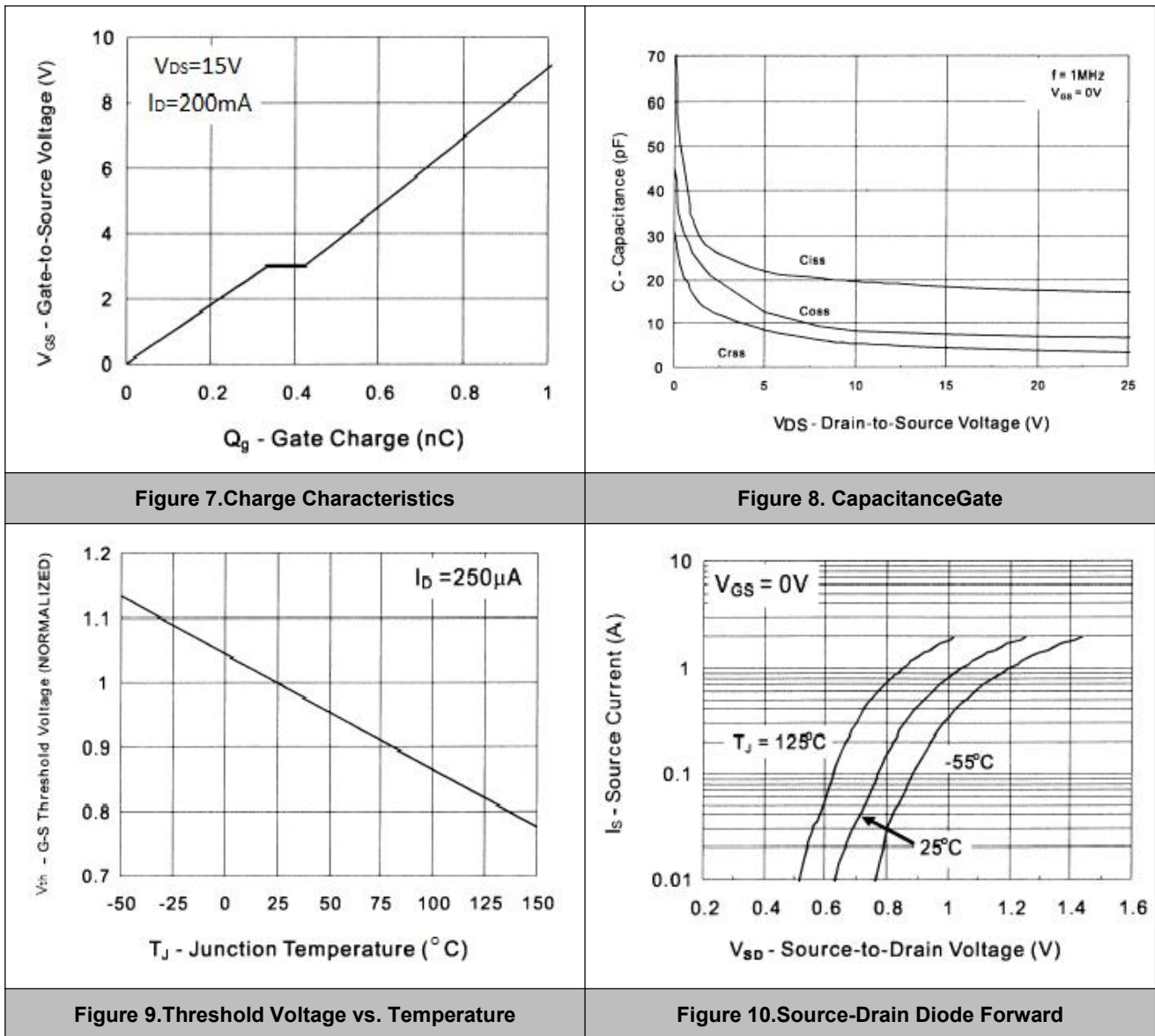
a: Max. current is limited by junction temperature.

b: Pulse test (pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$).

Typical Characteristics

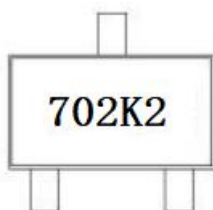


Typical Characteristics



Marking Information

SOT-23



Mechanical Data

- Case: SOT-23
- Marking: 702K2