

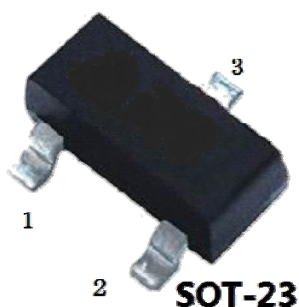
■ 描述 DESCRIPTIONS

60V , 270mA , N-Channel Mosfet in SOT-23 Plastic Package .

■ 特点 FEATURES

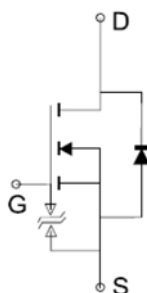
- Low On-Resistance $R_{DS(ON)} \leq 3\Omega @ V_{GS}=10V$ $R_{DS(ON)} \leq 4\Omega @ V_{GS}=4.5V$
- Fast Switching Speed
- ESD Protection HBM up to 2KV
- Halogen-free

■ 引脚说明 PIN ASSIGNMENT



- 1 Gate
- 2 Source
- 3 Drain

■ 内部等效电路 Equivalent Circuit



■ 型号构成 Name rule

基本名称 Name			辅助识别代码 Additional code			
第一部分 Part 1	第二部分 Part 2	第三部分 Part 3	第四部分 Part 4	第五部分 Part 5	第六部分 Part 6	第七部分 Part 7
品牌 Brand	产品类别 Type	产品型号 Model	分档 Value	分隔号 Separatrix	封装代码 Package	附加码 (备用) Extra-code
D	K : MOS	7002K		"—"	B: SOT-23	

■ 额定值 ABSOLUTE MAXIMUM RATINGS (TC=25°C unless otherwise noted)

特性参数 CHARACTERISTIC	符号 SYMBOL	额定值 RATING	单位 UNIT
漏源电压 Drain-Source Voltage	V_{DS}	60	V
栅源电压 Gate-Source Voltage	V_{GS}	±20	V
漏极电流 Continuous Drain Current	I_D	0.27	A
脉冲漏极电流 Pulsed Drain Current	I_{DM}	1.1	A
耗散功率 Power dissipation	P_D	300	mW
结温 Junction Temperature	T_j	150	°C
存储温度 Storage temperature	T_{stg}	-55~150	°C

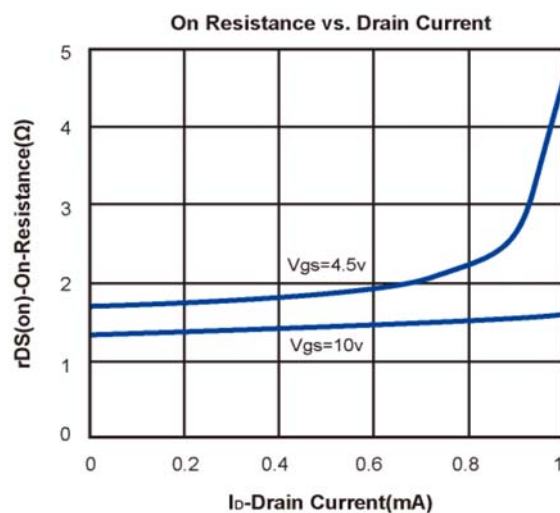
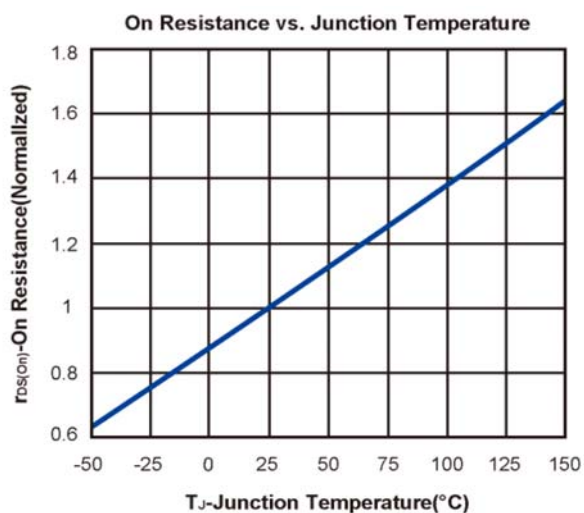
■ 电特性 ELECTRICAL CHARACTERISTICS

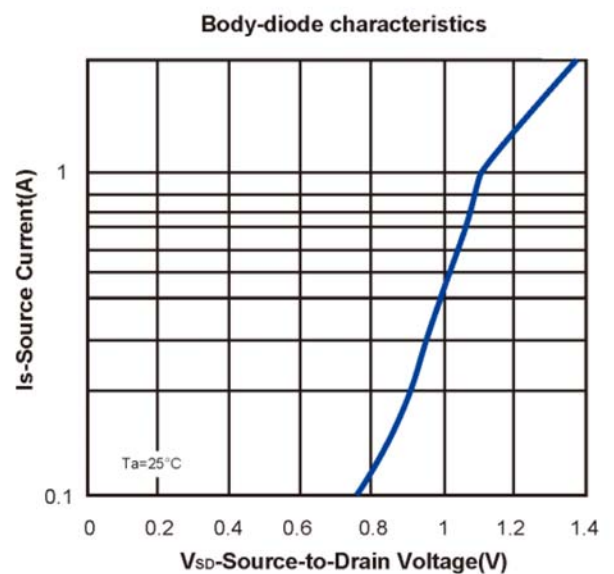
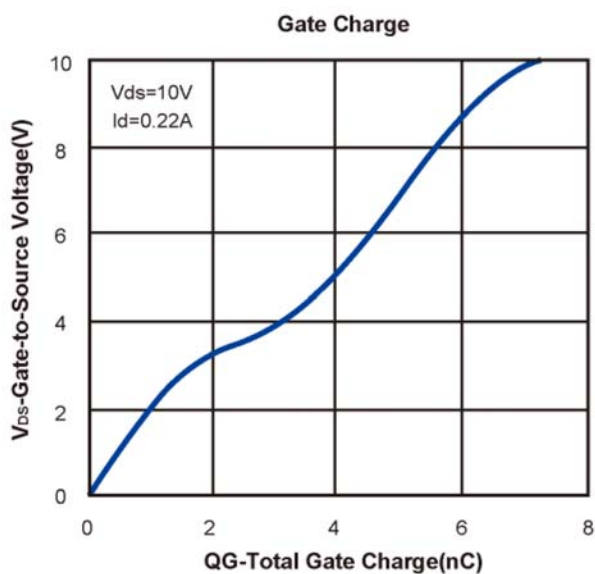
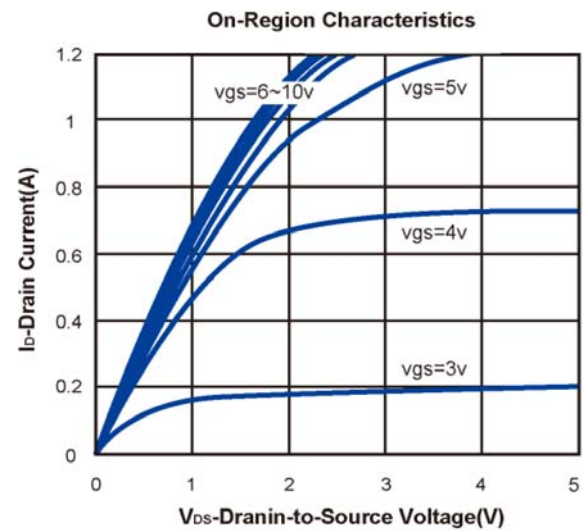
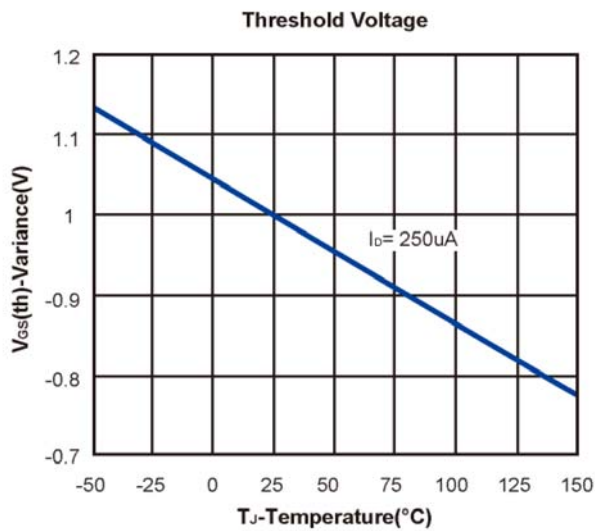
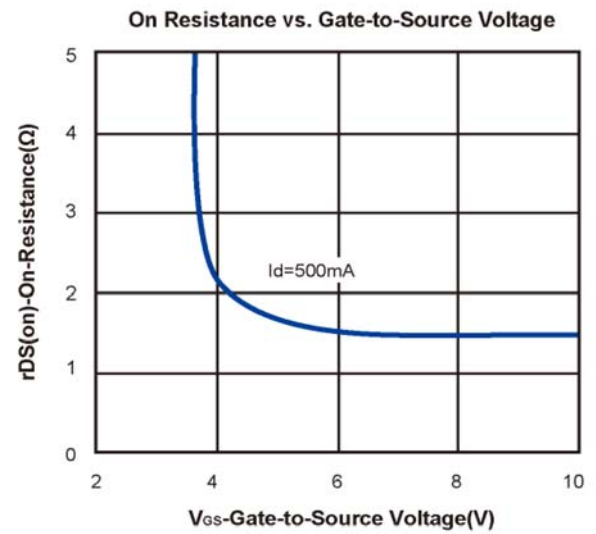
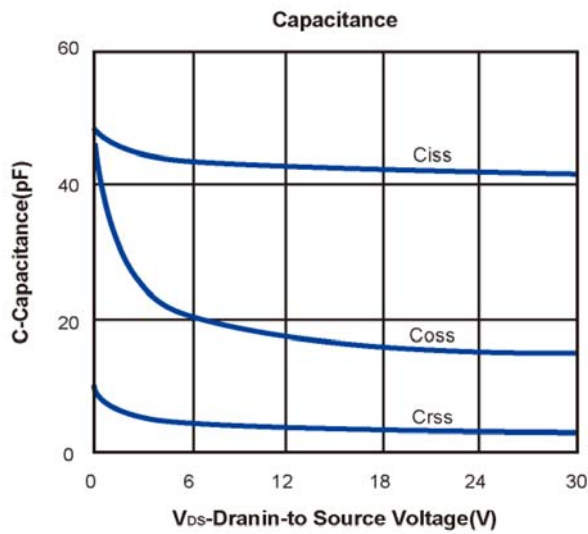
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

特性参数 CHARACTERISTIC	符号 SYMBOL	测试条件 TEST CONDITIONS	最小值 MIN.	典型值 TYP.	最大值 MAX.	单位 UNIT
漏源击穿电压 Drain-Source Voltage	BV_{DSS}	$I_D = 250\mu A, V_{GS} = 0$	60	70		V
开启电压 Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	-	2.5	V
截止栅极电流 Gate-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 20V$	-	-	±10	uA
饱和漏源电流 Drain-Source Leakage Current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0,$	-	-	1	μA
通态漏源电阻 Static Drain-Source On Resistance	$R_{DS(on)1}$	$V_{GS} = 10V, I_D = 500mA$	-	2	3	Ω
	$R_{DS(on)2}$	$V_{GS} = 4.5V, I_D = 200mA$	-	2.3	4	Ω
源漏正向电压	V_{SD}	$I_S = 200mA, V_{GS} = 0$	-	-	1.3	V

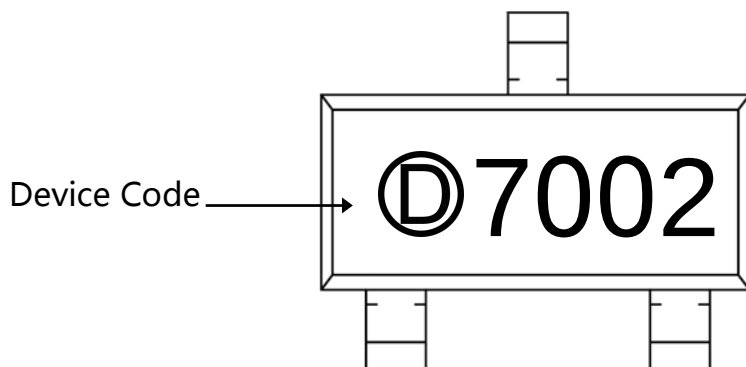
Drain-Source Diode Forward Voltage						
共源极短路输入电容 Input Capacitance	C_{iss}	$V_{GS} = 0V$ $V_{DS} = 25V$ $f = 1MHz$	-	15	-	pF
共源极短路输出电容 Output Capacitance	C_{oss}		-	12	-	pF
共源极短路反馈电容 Reverse Transfer Capacitance	C_{rss}		-	1	-	pF
开启时间 Turn-on Time	t_{on}	$V_{DD} = 30V; R_L = 150\Omega$, $V_{GS} = 10V; I_D = 200mA$; $R_{GEN} = 10\Omega$	-	3.7	-	ns
开启上升时间 Turn-On Rise Time	t_r		-	21.7	-	ns
关断时间 Turn-off Time	t_{off}		-	5.9	-	ns
关断下降时间 Turn-Off Fall Time	t_f		-	21.4	-	ns
Total Gate Charge 栅极电量	Q_g	$V_{DS} = 30V, V_{GS} = 4.5V$, $I_D = 200mA$	-	1.4	-	nC
Gate.to source charge 栅源极电量	Q_{gs}		-	2	-	nC
Gate.to drain charge 栅漏极电量	Q_{gd}		-	0.2	-	nC

■ 典型特性 TYPICAL CHARACTERISTICS

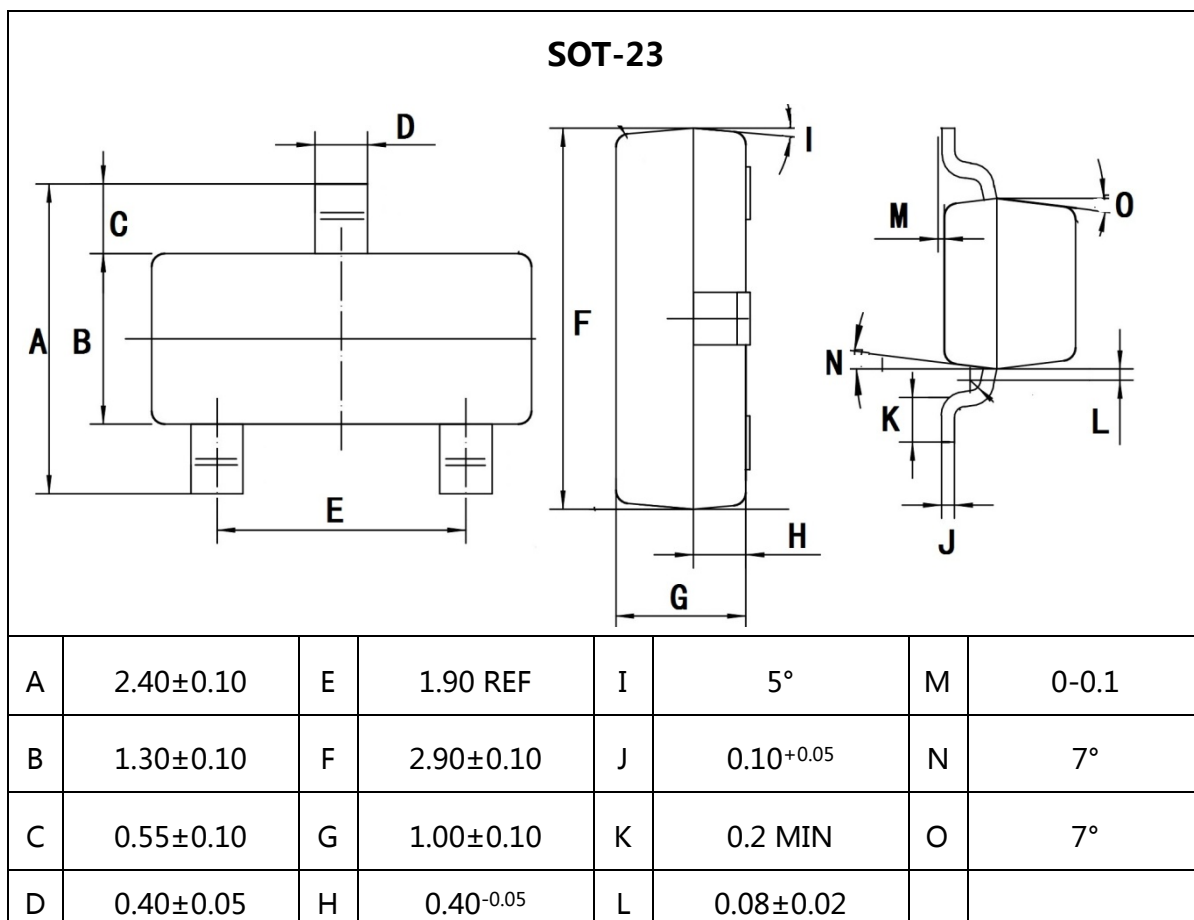




■ 打标 DEVICE MARKING



■ 外形尺寸 DIMENSION



■ 包装信息 PACKAGE INFORMATION

材料名称 Material Name	颜色 Color	尺寸 Size	数量 Quantity	备注 Note
卷盘 Reel	蓝色 Blue	7 " *8mm	3K/Reel	
内盒 Inner Case	黄色 Yellow	185*185*140mm	30K/盒 (10 盘/盒) 30K/Case (10 Reel/ Case)	
外箱 Outer Box	黄色 Yellow	460*400*210mm	180K/箱 (6 盒/箱) 180K/Box (6 Case/Box)	
标签 Label	白色 White	68*40mm	—	贴卷盘、内盒、外箱 Label on reel、inner case、 outer box