

CSM620P03S723

60V P-Channel Enhancement Mode MOSFET

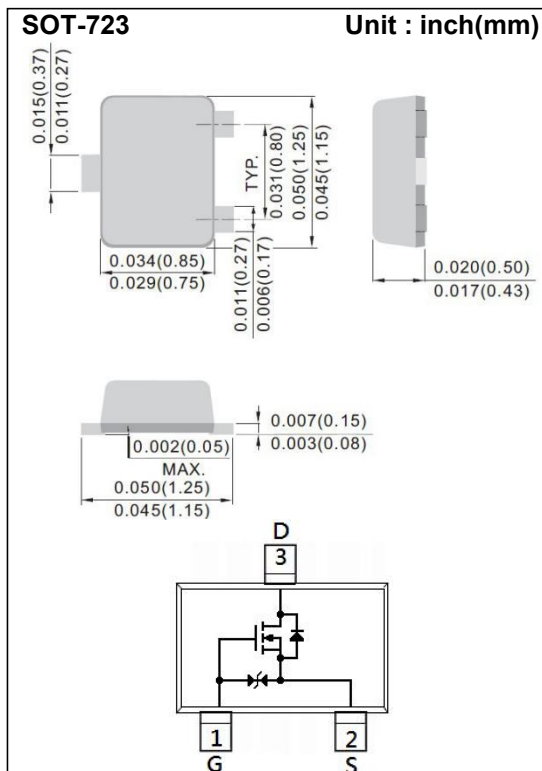
Voltage **-60 V** **Current** **-200mA**

FEATURES

- $R_{DS(ON)}$, $V_{GS}@10V, I_{DS}@500mA=2.5\Omega$
- $R_{DS(ON)}$, $V_{GS}@4.5V, I_{DS}@200mA=3\Omega$
- Advanced Trench Process Technology
- High Density Cell Design For Ultra Low On-Resistance
- Very Low Leakage Current In Off Condition
- Specially Designed for Battery Operated Systems, Solid-State Relays Drivers : Relays, Displays, Lamps, Solenoids, Memories, etc.

MECHANICAL DATA

- Case: SOT 723 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00007 ounces, 0.002 grams



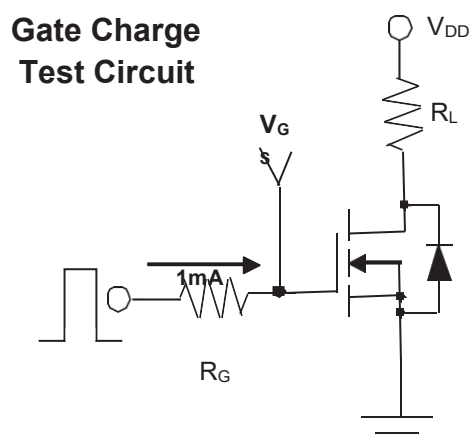
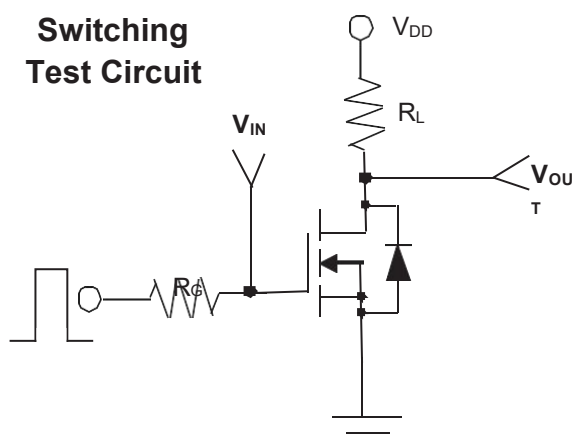
Maximum RATINGS and Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Drain-Source Voltage		V _{DS}	-60	V
Gate-Source Voltage		V _{GS}	±20	V
Continuous Drain Current		I _D	-300	mA
Pulsed Drain Current		I _{DM}	-600	mA
Power Dissipation	T _a =25°C	P _D	150	mW
	Derate above 25°C		1.2	mW/ °C
Operating Junction and Storage Temperature Range		T _J , T _{STG}	-55~150	°C
Typical Thermal resistance - Junction to Ambient		R _{θJA}	833	°C/W

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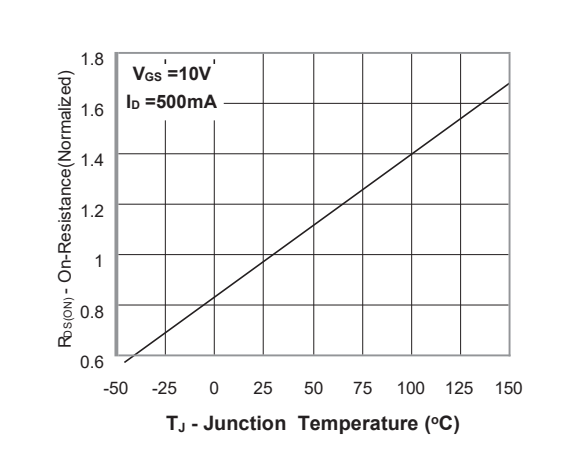
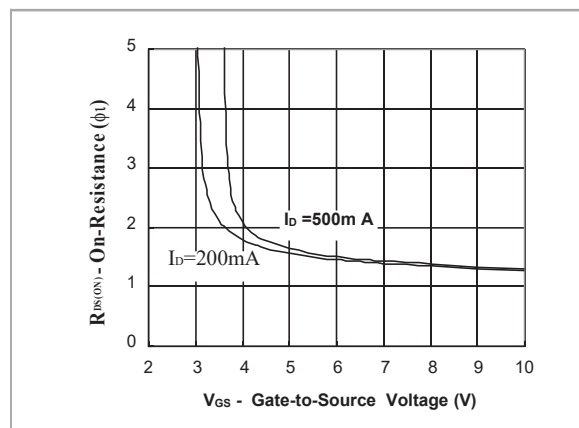
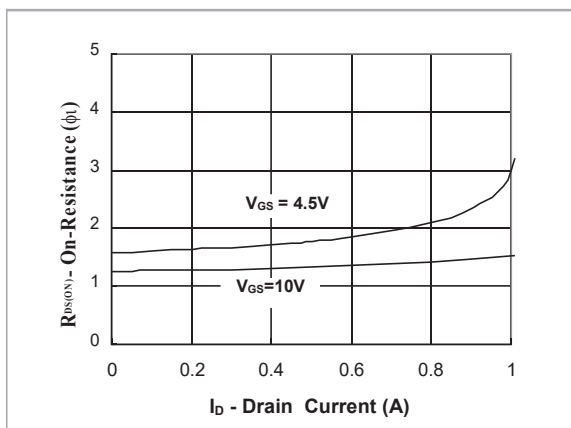
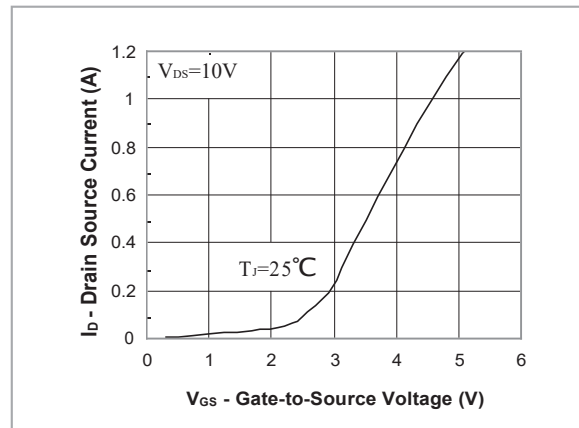
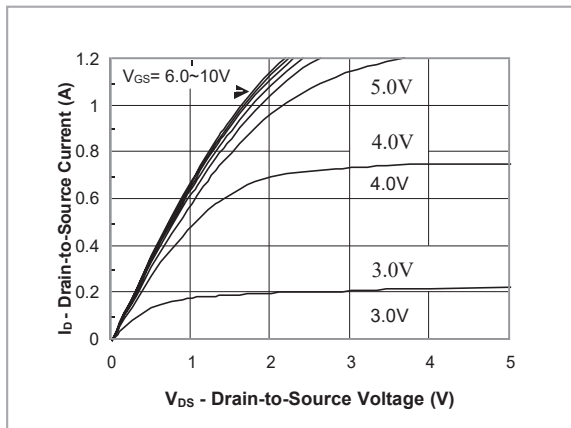
ELECTRICAL CHARACTERISTICS

Para meter	Symbol	Te st Condition	Min.	Typ .	Max.	Uni ts
Sta t i c						
Drain- Source Breakdown Voltage	$BV_{DS\ S}$	$V_{GS}=0\ V, I_D=10\ \mu A$	60	-	-	V
Gate Threshold Voltage	$V_{GS\ (th)}$	$V_{DS}=V_{GS}, I_D=250\ \mu A$	1	-	2.5	V
Drain-Source On-State Resistance	$R_{DS\ (on)}$	$V_{GS}=4.5V, I_D=200mA$	-	-	3	Ω
Drain-Source On-State Resistance	$R_{DS\ (on)}$	$V_{GS}=10V, I_D=500mA$	-	-	2.5	
Zero Gate Voltage Drain Current	$I_{DS\ S}$	$V_{DS}=60V, V_{GS}=0V$	-	-	1	μA
Gate Body Leakage	$I_{GS\ S}$	$V_{GS}=\pm 20\ V, V_{DS}=0\ V$	-	-	± 10	μA
Forward Transconductance	g_{fs}	$V_{DS}=15\ V, I_D=250\ m\ A$	100	-	-	m S
Dynamic						
To ta l Gate Charge	Q_g	$V_{DS}=15\ V, I_D=200\ m\ A$ $V_{GS}=4.5V$	-	-	0.8	nC
Turn- On D e la y Ti me	$td_{(on)}$	$V_{DD}=30V, R_L=150\ \wedge$ $I_D=200mA, V_{GEN}=10V$ $R_G=10\ \wedge$	-	-	20	ns
Turn-Off D e lay Ti me	$td_{(off)}$		-	-	125	
Input Capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0\ V$ $f=1.0MHz_Z$	-	-	35	pF
Output Capacitance	$C_{os\ s}$		-	-	10	
Revers e Transfer Capacitance	C_{rss}		-	-	5	
Source - Drain Diode						
Diode Forward Voltage	V_{SD}	$I_s=200mA, V_{GS}=0\ V$	-	0.82	1.3	V
Continuo us D i ode Forward Current	I_s	-	-	-	115	m A
Pulsed D i ode Forward Current	I_{sM}	-	-	-	800	m A



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Typical Characteristics Curves ($T_A=25^\circ\text{C}$, unless otherwise noted)



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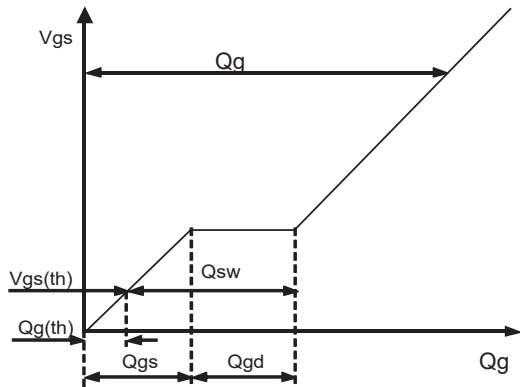


Fig. 6 - Gate Charge Waveform

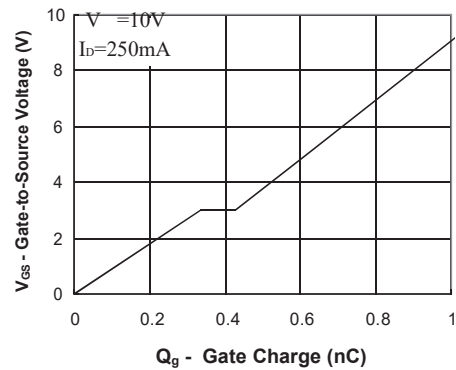


Fig. 7 - Gate Charge

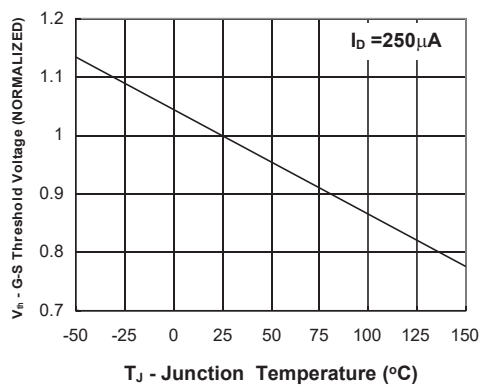


Fig. 8 - Threshold Voltage vs Temperature

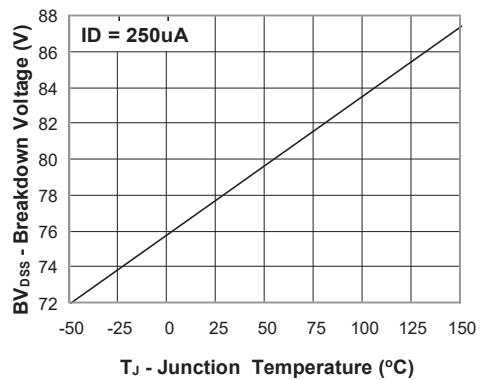


Fig. 9 - Breakdown Voltage vs Junction Temperature

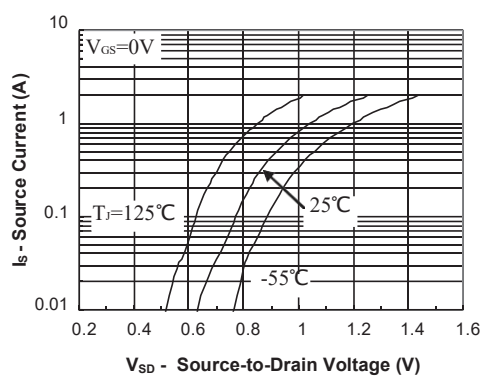


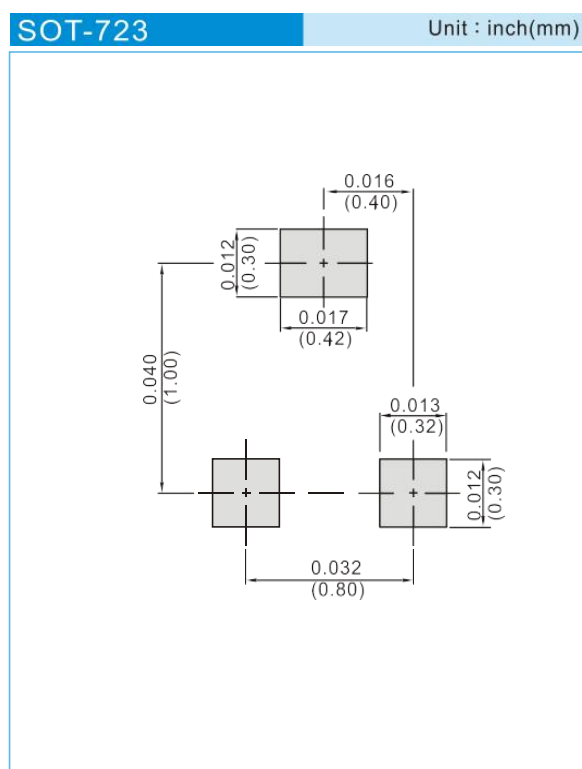
Fig. 10 - Source-Drain Diode Forward Voltage

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PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing type
CSM620P03S723	SOT-723	8K pcs / 7" reel

MOUNTING PAD LAYOUT



CSM620P03S723

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