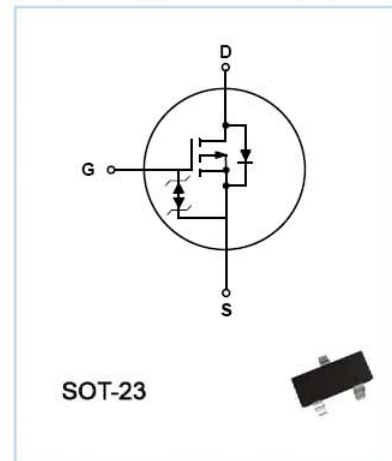


P-Channel Enhancement Mode MOSFET Feature

- -60V/-0.13A, $R_{DS(ON)} = \leq 6 \Omega$ (MAX) @ $V_{GS} = -10V$
- Super High dense cell design for extremely low $R_{DS(ON)}$
- Reliable and Rugged
- SOT-23 for Surface Mount Package
- ESD protection



Applications

- Power Management
Portable Equipment and Battery Powered Systems.

Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

Parameter	Symbol	Limit	Units
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	-0.13	A

Electrical Characteristics

$T_A = 25^\circ\text{C}$ Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
Off Characteristics						
Drain to Source Breakdown Voltage	BVDSS	$V_{GS} = 0V, I_D = -250\mu A$	-60	-	-	V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -50V, V_{GS} = 0V$	-	-	-1	μA
Gate Body Leakage Current, Forward	I_{GSSF}	$V_{GS} = 20V, V_{DS} = 0V$	-	-	10	μA
Gate Body Leakage Current, Reverse	I_{GSSR}	$V_{GS} = -20V, V_{DS} = 0V$	-	-	-10	μA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = -1mA$	-0.8	-1.5	-2.5	V
Static Drain-sourceOn-Resistance	$R_{DS(ON)}$	$V_{GS} = -4.5V, I_{DS} = -0.2A$	-	4	7	Ω
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Voltage	VSD	$I_{SD} = 0.5A, V_{GS} = 0V$			-1.3	V



DYNAMIC PARAMETERS					
Input Capacitance	Ciss	VGS=0V, VDS=-5V, f=1MHz	30		pF
Output Capacitance	Coss		10		pF
Reverse Transfer Capacitance	Crss		5		pF
SWITCHING PARAMETERS					
Turn-On Delay Time	ID(on)	VGS=-10V, VDS=-15V, ID=-0.25A, RL=50 Ω	2.5		ns
Turn-On Rise Time	tr		1.0		ns
Turn-Off Delay Time	ID(off)		16		ns
Turn-Off Fall Time	tr		8		ns

Typical Characteristics

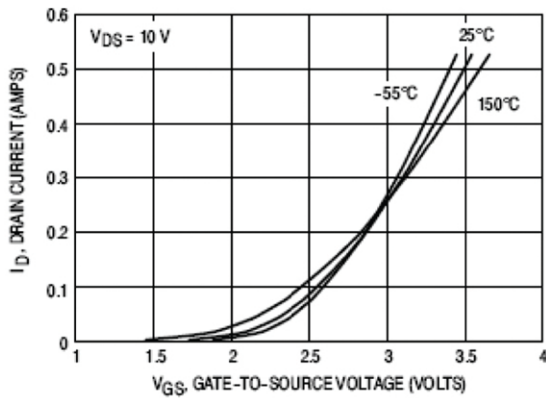


Figure 1. Transfer Characteristics

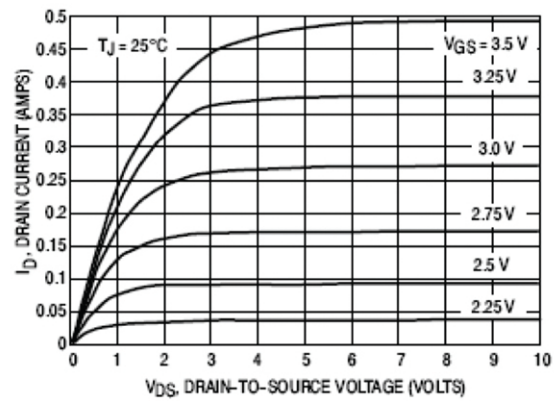


Figure 2. On-Region Characteristics

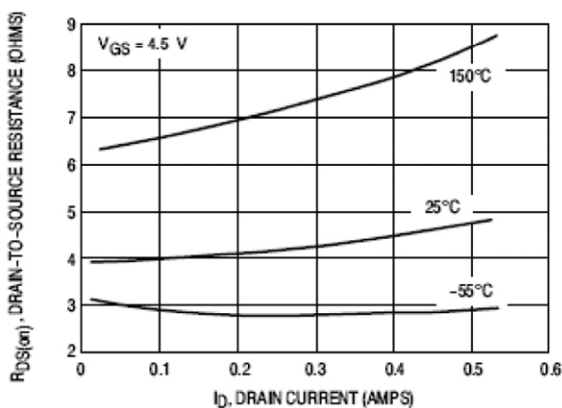


Figure 3. On-Resistance versus Drain Current

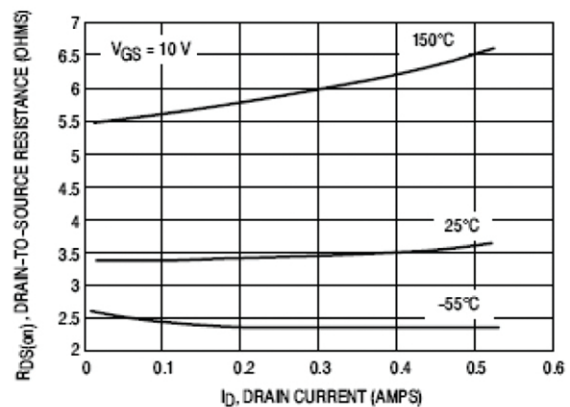


Figure 4. On-Resistance versus Drain Current



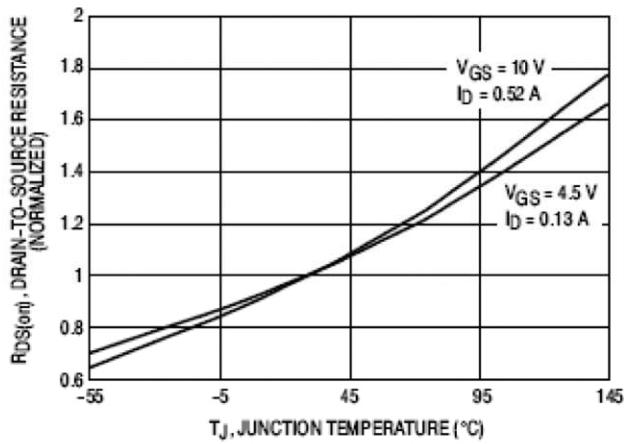


Figure 5. On-Resistance Variation with Temperature

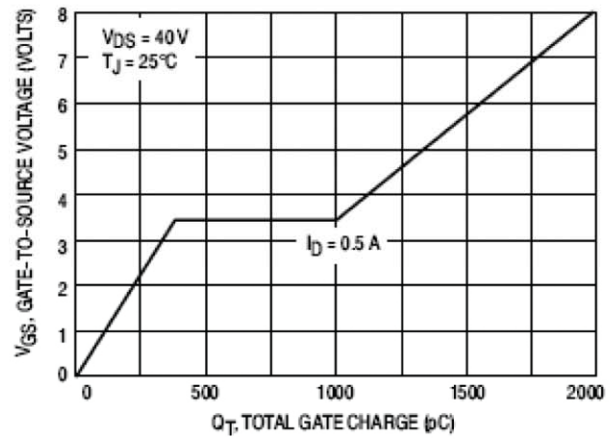


Figure 6. Gate Charge

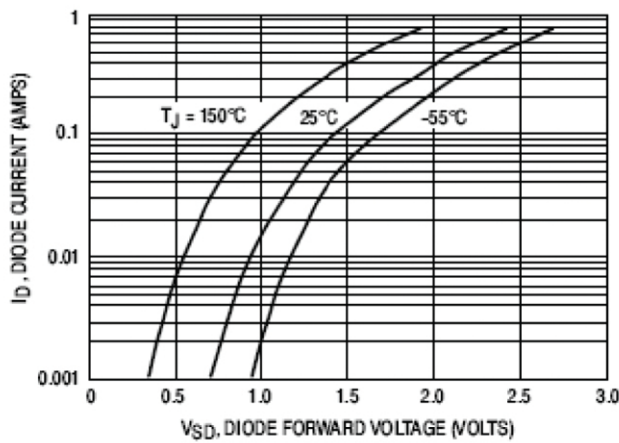


Figure 7. Body Diode Forward Voltage



SOT-23 Package Outline Dimensions (UNIT: mm)

