

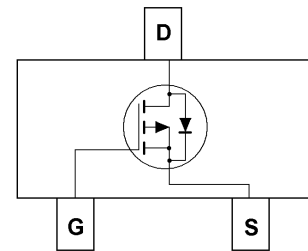
## P-Channel Enhancement Mode MOSFET

### Feature

- 20V/-2A,  $R_{DS(ON)} = 120\text{m}\Omega(\text{MAX})$  @  $V_{GS} = -4.5\text{V}$ .
- $R_{DS(ON)} = 150\text{m}\Omega(\text{MAX})$  @  $V_{GS} = -2.5\text{V}$ .
- Super High dense cell design for extremely low  $R_{DS(ON)}$
- Reliable and Rugged
- SOT-23 for Surface Mount Package



SOT-23



### 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	$V_{DS}$	-20	V
Gate-Source Voltage	$V_{GS}$	$\pm 10$	V
Drain Current-Continuous	$I_D$	-2	A

### Electrical Characteristics

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

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Units
<b>Off Characteristics</b>						
Drain to Source Breakdown Voltage	BVDSS	$V_{GS} = 0\text{V}, I_D = -250\mu\text{A}$	-20	-	-	V
Zero-Gate Voltage Drain Current	IDSS	$V_{DS} = -20\text{V}, V_{GS} = 0\text{V}$	-	-	-1	$\mu\text{A}$
Gate Body Leakage Current, Forward	IGSSF	$V_{GS} = 10\text{V}, V_{DS} = 0\text{V}$	-	-	100	nA
Gate Body Leakage Current, Reverse	IGSSR	$V_{GS} = -10\text{V}, V_{DS} = 0\text{V}$	-	-	-100	nA
<b>On Characteristics</b>						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = -250\mu\text{A}$	-0.4	-	-1.0	V
Static Drain-source On-Resistance	RDS(ON)	$V_{GS} = -4.5\text{V}, I_D = -2.0\text{A}$	-	--	120	$\text{m}\Omega$
		$V_{GS} = -2.5\text{V}, I_D = -1.5\text{A}$	-	--	150	$\text{m}\Omega$
<b>Drain-Source Diode Characteristics and Maximum Ratings</b>						
Drain-Source Diode Forward Voltage	VSD	$V_{GS} = 0\text{V}, I_S = -1.25\text{A}$			-1.2	V

## Typical Characteristics

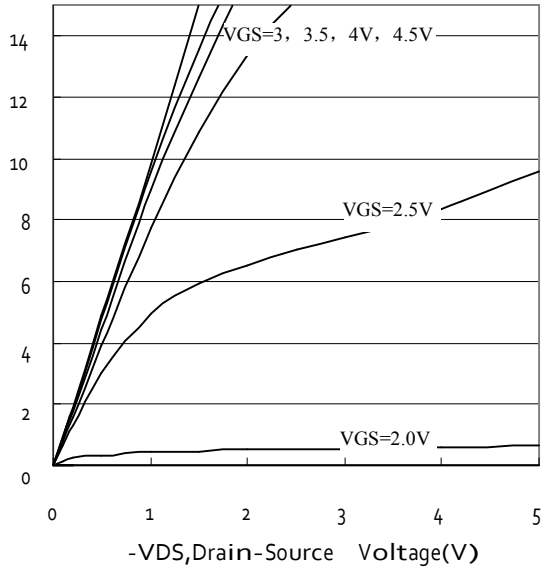


Figure 1. Output Characteristics

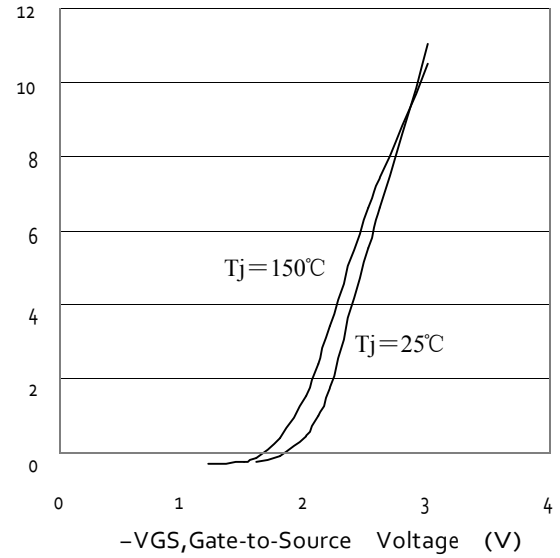


Figure 2. Transfer Characteristics

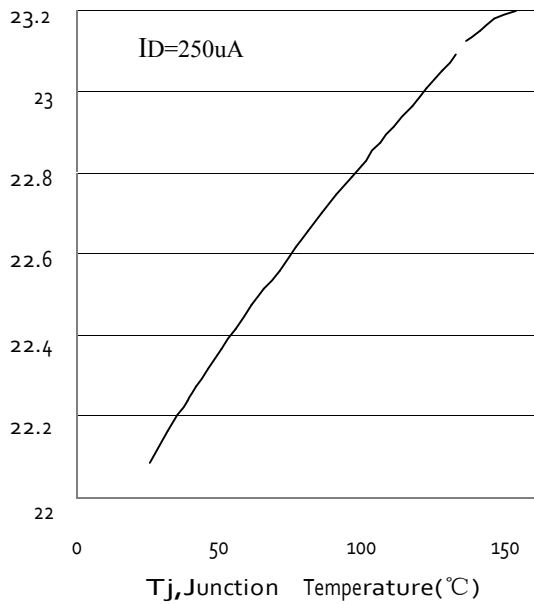


Figure 3. Breakdown Voltage Variation with Temperature

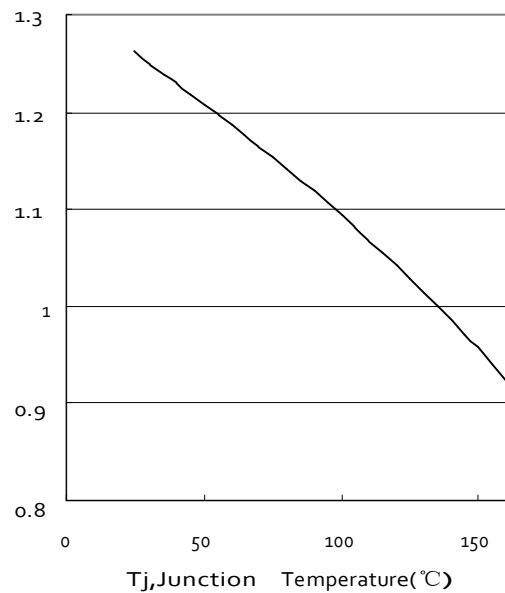


Figure 4. Gate Threshold Variation with Temperature

## Typical Characteristics

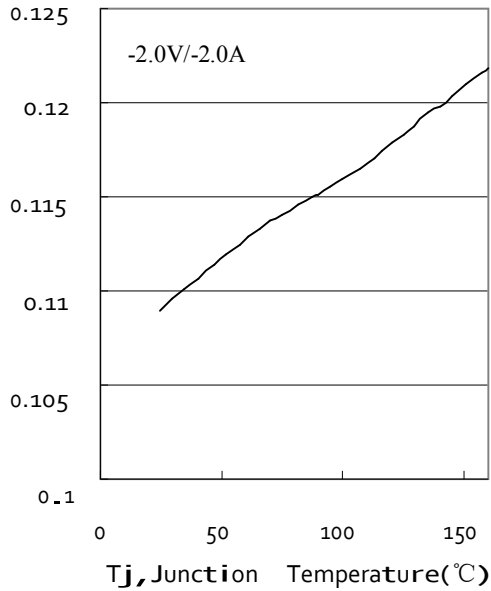


Figure 5. On-Resistance Variation with Temperature

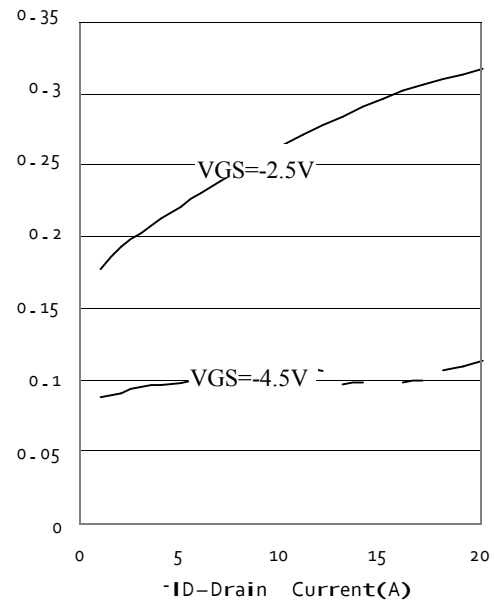


Figure 6. On-Resistance vs. Drain Current

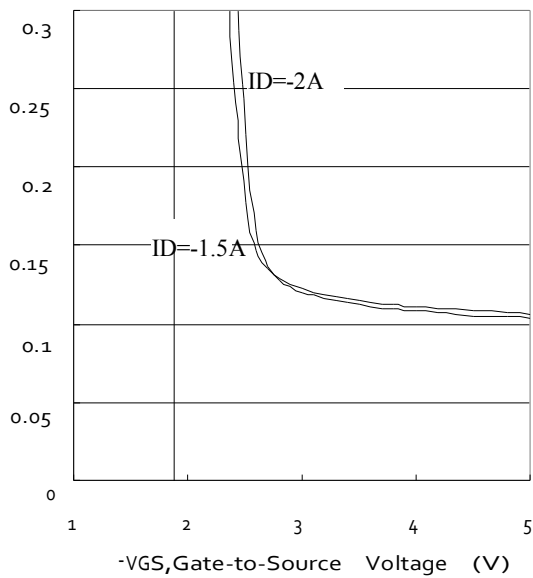


Figure 7. On-Resistance vs. Gate-to-Source Voltage

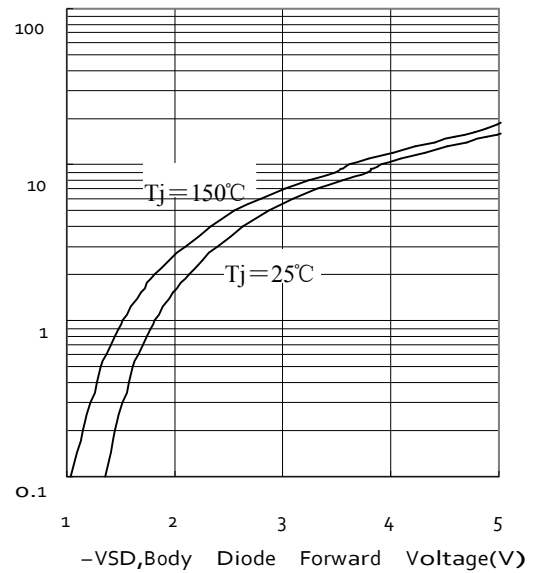


Figure 8. Source-Drain Diode Forward Voltage

## Package Outline Dimensions (UNIT: mm)

### SOT-23

