TY2301

P-CHANNEL MOSFET FOR SWITCHING

Feature

-20V/-3A, $R_{DS(ON)}$ = 120mΩ(MAX) @V_{GS} = -4.5V.

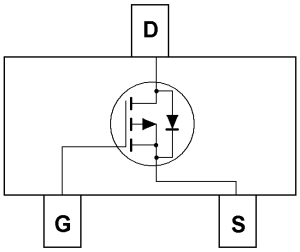
$R_{DS(ON)}$ = 150mΩ(MAX) @V_{GS} = -2.5V.

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℃ Unless Otherwise noted

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	±8	
Continuous Drain Current	Ta=25℃	I_D	- 3	A
	Ta=70℃		- 2	
Pulsed Drain Current		I_{DM}	-10	
Power Dissipation	Ta=25℃	P_D	1. 5	W
	Ta=70℃		1.25	
Thermal Resistance.Junction- to-Ambient *1		R_{thJA}	100	℃/W
Thermal Resistance.Junction- to-Ambient *3			166	
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	-55 to 150	

Electrical Characteristics

T_A=25℃ Unless Otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=-250μA, V_{GS}=0V	-20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, V_{GS}=0V			-1	μA
		V_{DS}=-20V, V_{GS}=0V, T_J=55℃			-10	
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}=±8V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250μA	-0.45		-1	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V, I_D=-2.8A		105	130	mΩ
		V_{GS}=-2.5V, I_D=-2.0A		145	190	
On state drain current	$I_{D(ON)}$	V_{GS}=-4.5V, V_{DS} ≤-5V	-6			A
		V_{GS}=-2.5V, V_{DS} ≤-5V	-3			
Forward Transconductance	g_{FS}	V_{DS}=-5V, I_D=-2.8A		6.5		S

■ Marking

Marking	W26*

Typical Characteristics

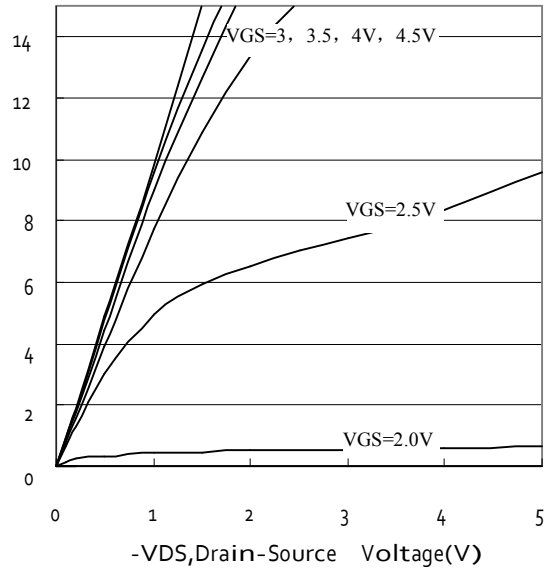


Figure 1. Output Characteristics

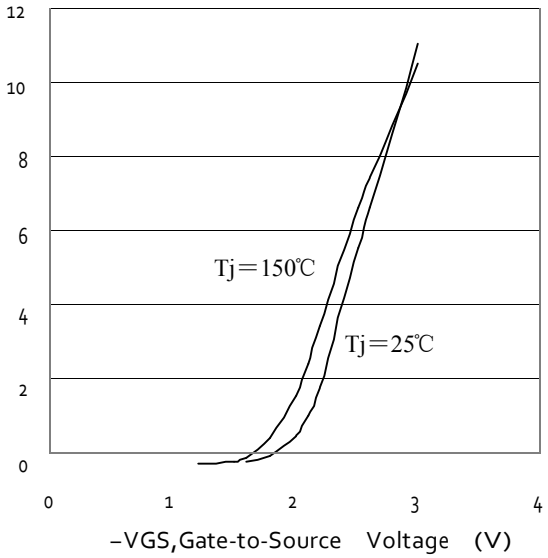


Figure 2. Transfer Characteristics

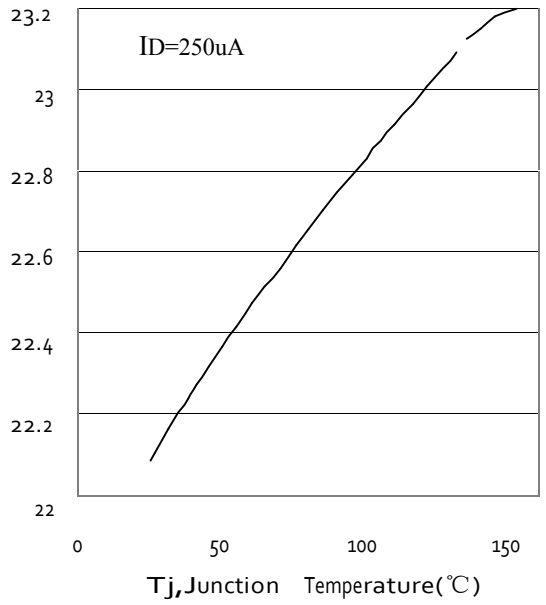


Figure 3. Breakdown Voltage Variation with Temperature

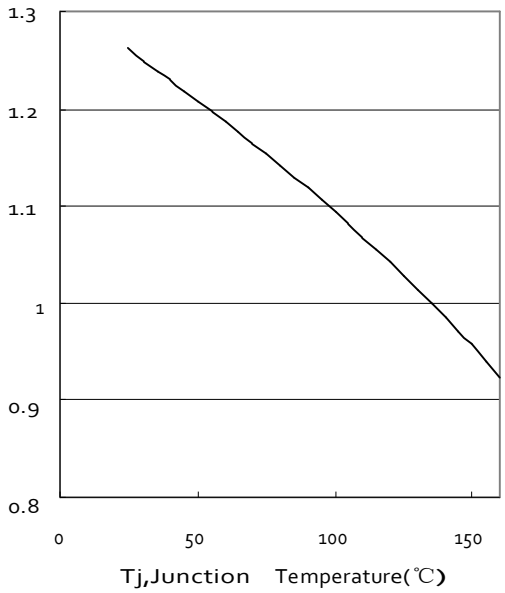


Figure 4. Gate Threshold Variation with Temperature

Typical Characteristics

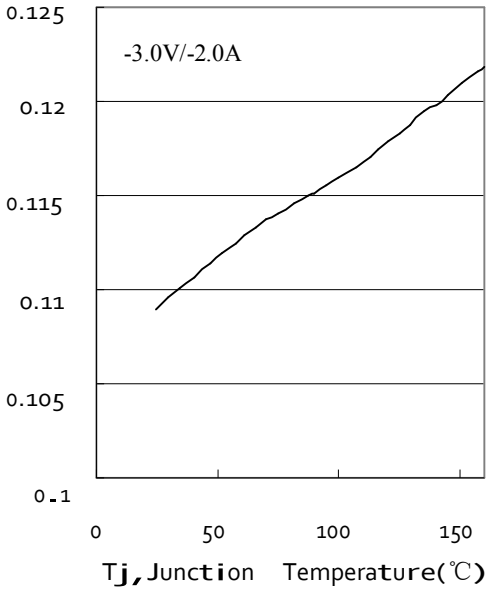


Figure 5. On-Resistance Variation with Temperature

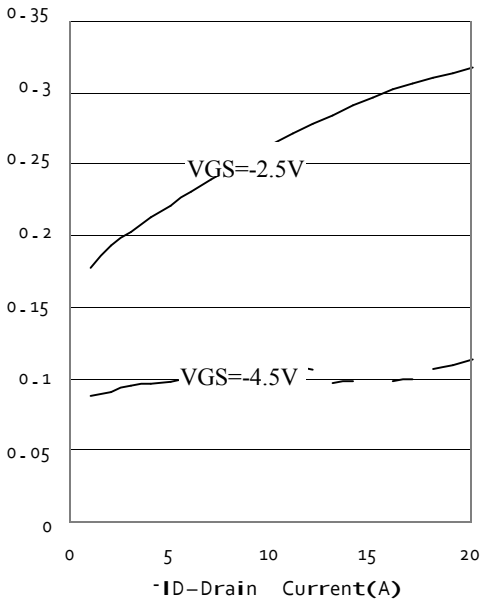


Figure 6. On-Resistance vs. Drain Current

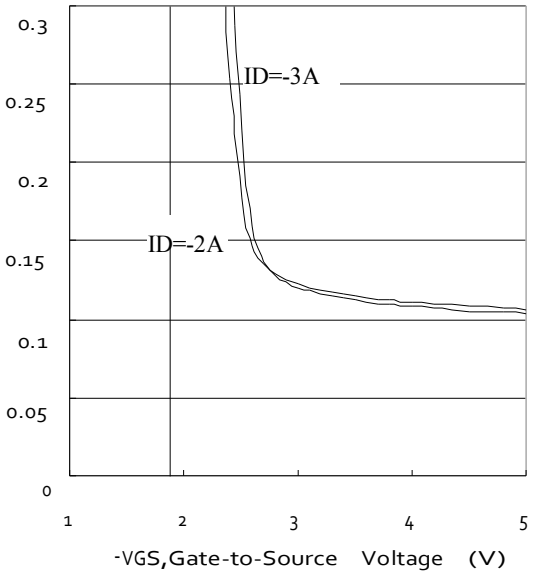


Figure 7. On-Resistance vs. Gate-to-Source Voltage

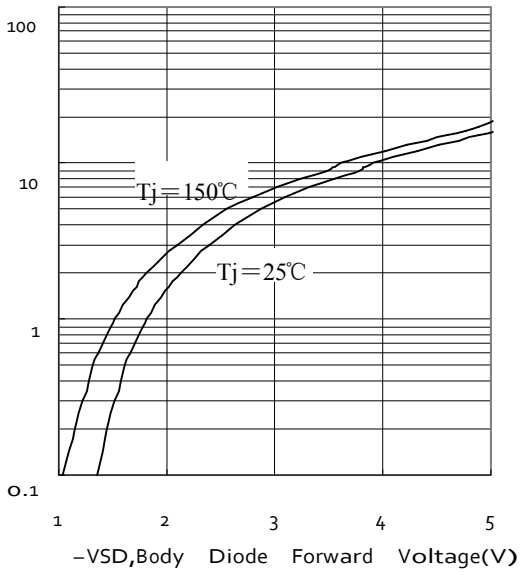
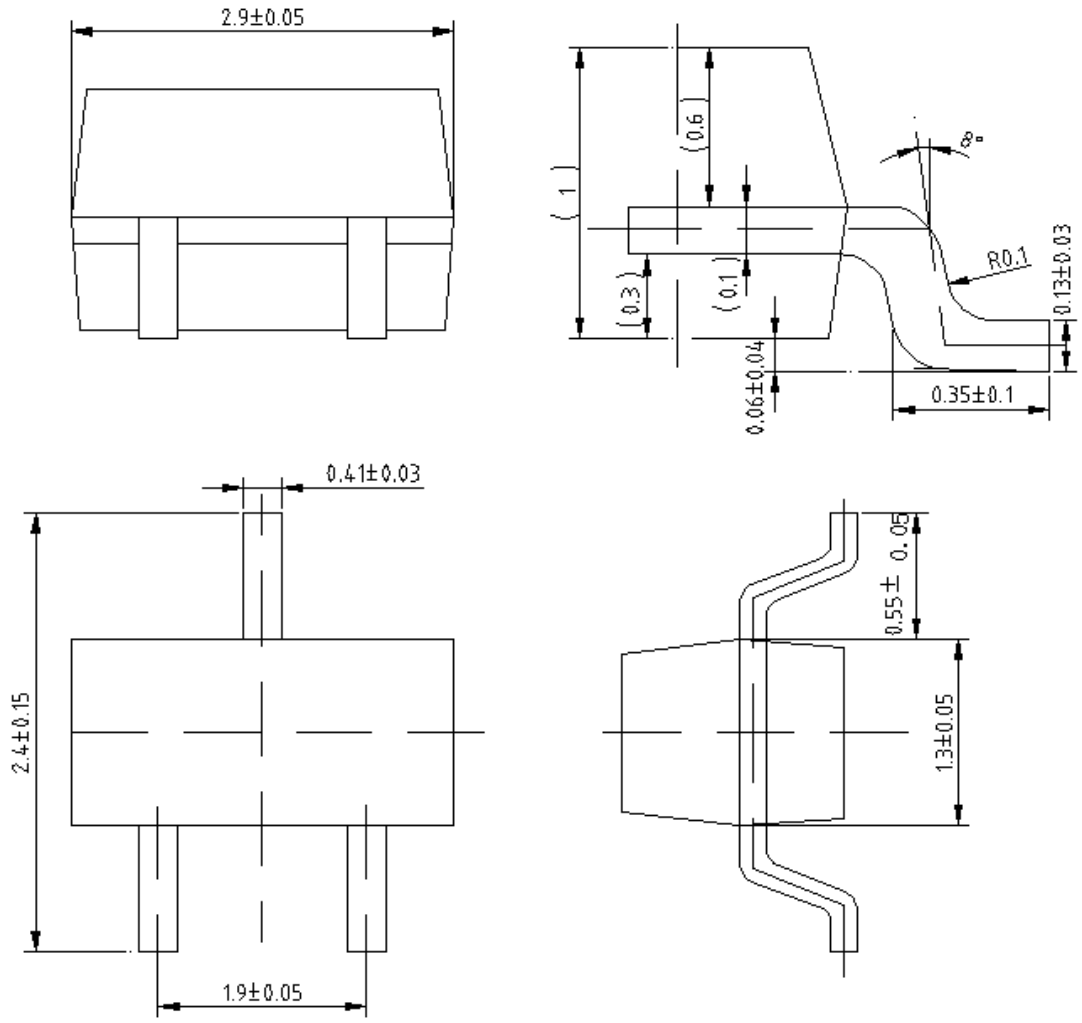


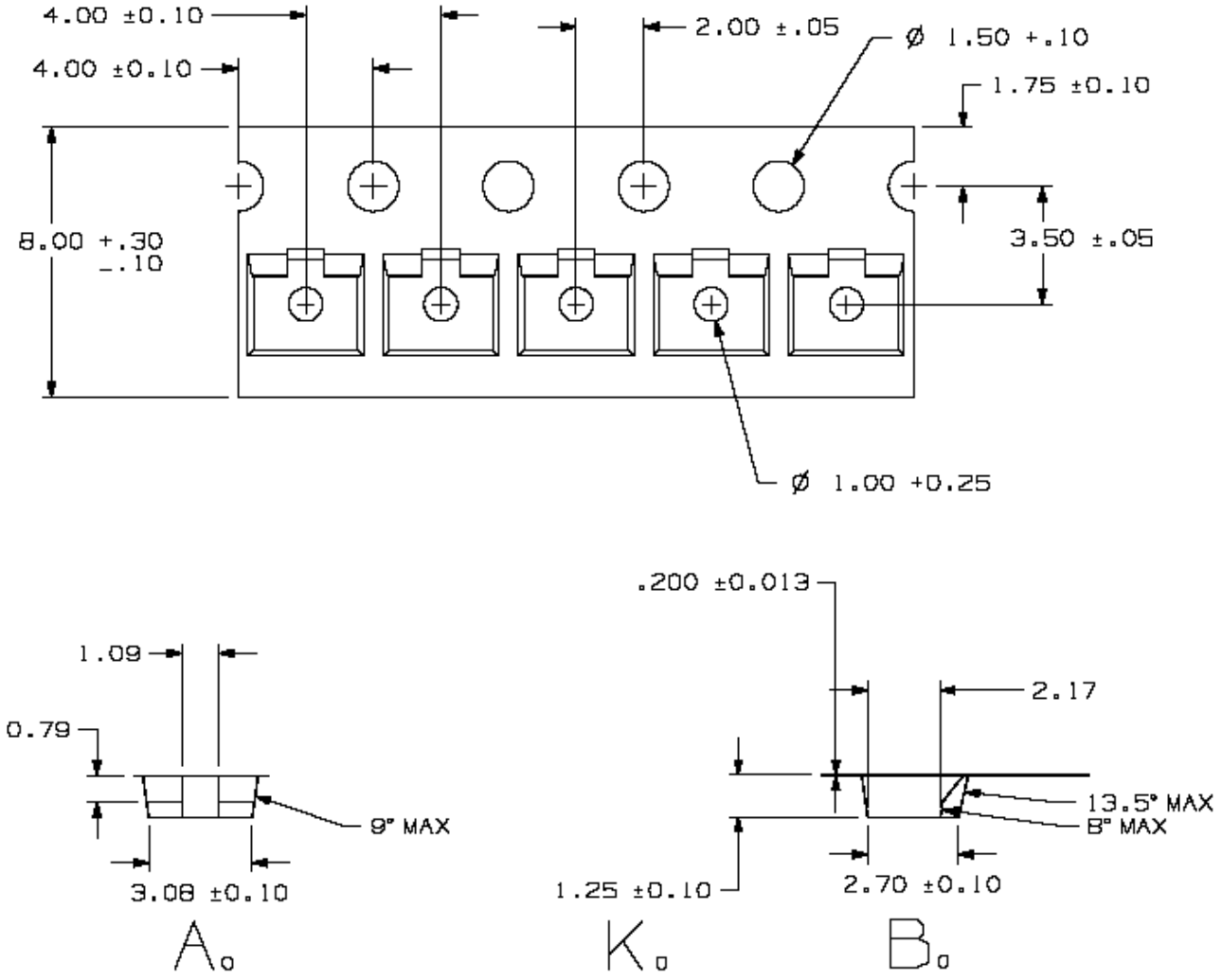
Figure 8. Source-Drain Diode Forward Voltage

Package Outline Dimensions (UNIT: mm)

SOT-23



SOT-23 Carrier Tape



SOT-23 Carrier Reel