

P-Channel Enhancement Mode MOSFET

Features

- -25V/-4.2A, $R_{DS(ON)}=130\text{m}\Omega(\text{Max})@V_{GS}=-10\text{V}$
 $R_{DS(ON)}=150\text{m}\Omega(\text{Max})@V_{GS}=-4.5\text{V}$
 $R_{DS(ON)}=180\text{m}\Omega(\text{Max})@V_{GS}=-2.5\text{V}$
- Super high dense cell design for extremely low $R_{DS(ON)}$
- Reliable and rugged
- SC-59 for surface mount package

Marking:AFKA

Applications

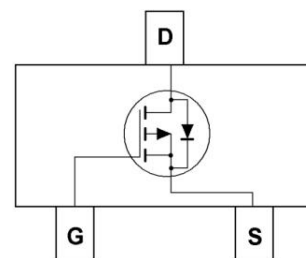
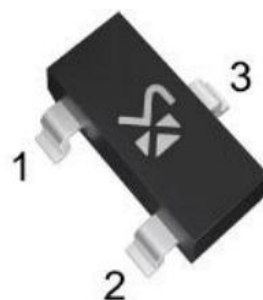
- Power Management
- Portable Equipment and Battery Powered Systems

Absolute Maximum Ratings($T_A=25^\circ\text{C}$, unless otherwise noted.)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	-25	V
Gate-source Voltage	V_{GS}	± 12	V
Drain Current-Continuous	I_D	-4.2	A
Maximum Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	BV _{DSS}	V _{GS} =0V,I _D =-250μA	-25			V
Drain-source leakage current	I _{DSS}	V _{DS} =-25V,V _{GS} =0V			-1	μA
		T _J =85°C			-30	
Gate-source leakage current	I _{GSS}	V _{DS} =0V,V _{GS} =±12V			±100	nA
On Characteristics ⁽³⁾						
Gate Threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =-250μA	-0.7		-1.3	V
Drain-source on resistance	R _{DS(on)}	V _{GS} =-10V,I _D =-4.2A			130	mΩ
		V _{GS} =-4.5V,I _D =-4.0A			150	
		V _{GS} =-2.5V,I _D =-1.0A			180	
Drain-Source Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V,I _D =-1.0A			-1.0	V



SC-59

Typical Characteristics

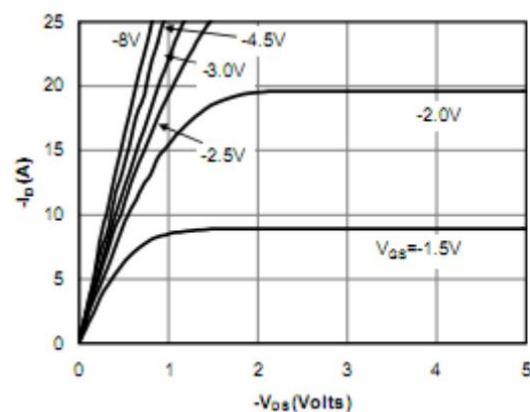


Fig 1: On-Region Characteristics

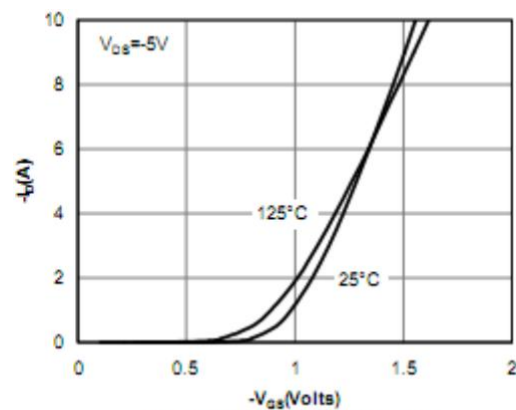


Figure 2: Transfer Characteristics

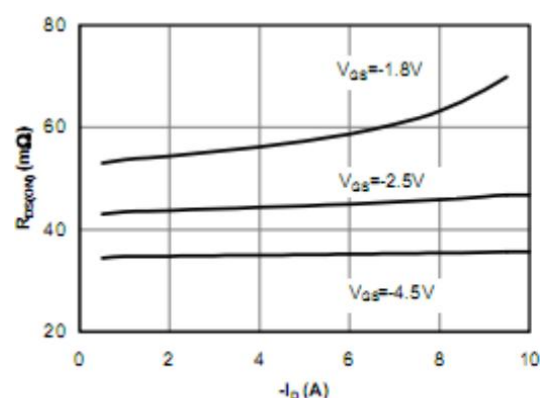


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

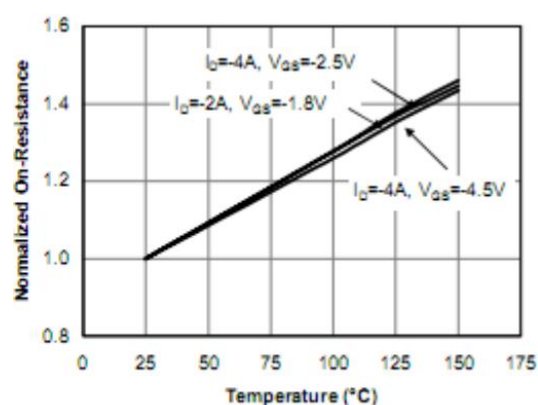


Figure 4: On-Resistance vs. Junction Temperature

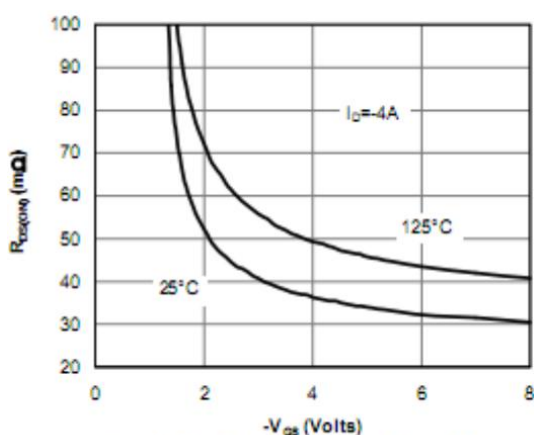


Figure 5: On-Resistance vs. Gate-Source Voltage

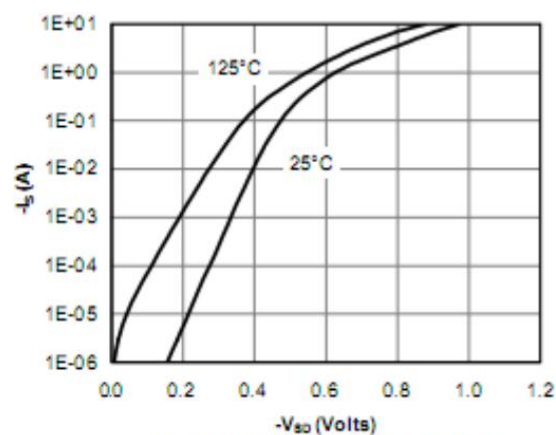
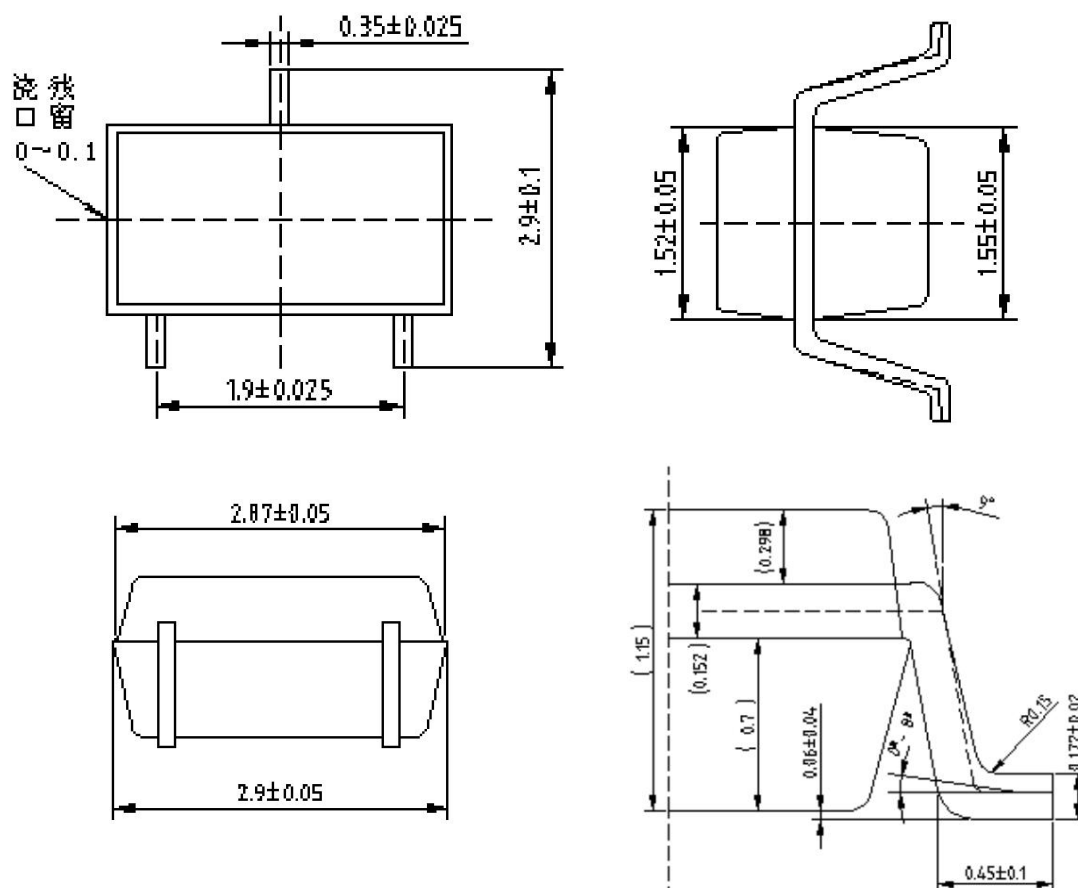


Figure 6: Body-Diode Characteristics

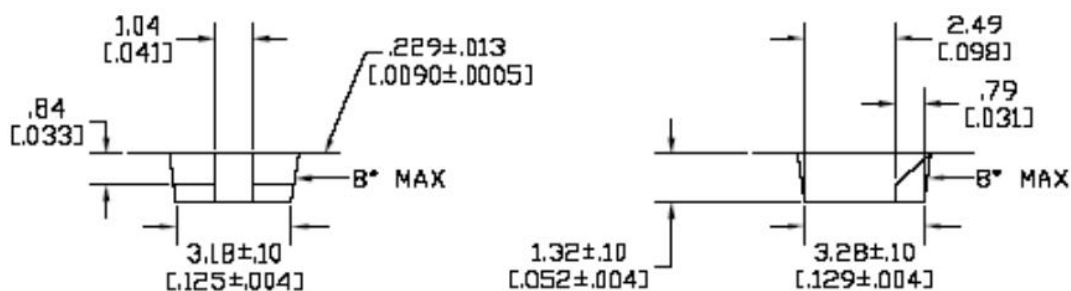
Package Information

SC-59

Dimensions in mm



SC-59 Carrier Tape



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