ACE1532B

N-Channel Enhancement Mode Field Effect Transistor

Features

- Low On-Resistance
- Fast Switching Speed
- Low-voltage drive
- Easily designed drive circuits
- We declare that the material of product is ROHS compliant.
- ESD Protected:2000V

Absolute Maximum Ratings

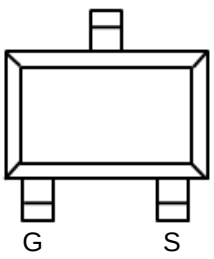
Parameter	Symbol	Max	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current (Continuous) (T_A=25℃)	I_D	250	mA
Drain Current (Pulse)	I_{DM}*1	1.6	A
Power Dissipation (T_A=25℃)	P_D*2	225	mW
Operating Temperature / Storage Temperature	T_J/T_{STG}	-55/150	°C

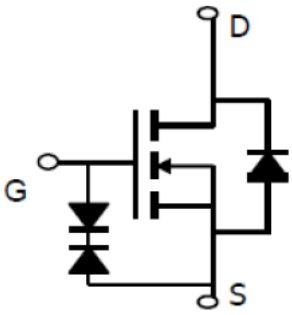
*1 Pw ≦10 μs, Duty cycle ≦1 %

*2 When mounted on a 1*0.75*0.062 inch glass epoxy board%

Packaging Type

SOT-23-3





Ordering information

ACE1532B XX + H

- Halogen - free
- Pb - free
- BM : SOT-23-3

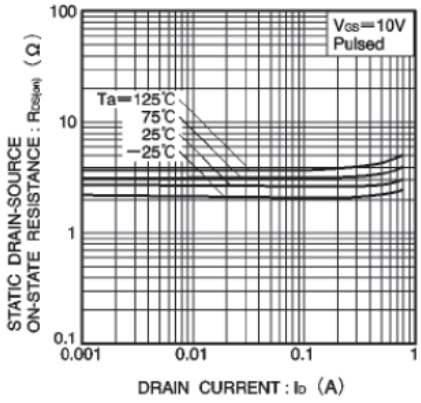
Electrical Characteristics

(T_A=25℃, unless otherwise specified)

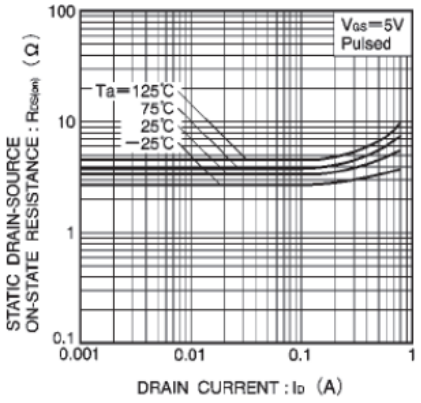
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=10uA	60			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_{DS}=250uA	1.0	1.85	2.5	
Gate Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=±20V			10	uA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			1	uA
Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=0.5A			7.5	Ω
		V_{GS}=5V, I_D=0.05A			7.5	
Forward Transconductance	gfs*	V_{DS}=10V,I_D=0.5A		15		S
Switching						
Turn-On Time	td(on)*	V_{GS}=10V, I_D=0.19A, V_{DS}=30V, R_L=155Ω		12		nS
Turn-Off Time	td(off)*			20		
Dynamic						
Input Capacitance	Ciss	V_{GS}=0V, V_{DS}=25V, f=1MHz		52		pF
Output Capacitance	Coss			7.7		
Reverse Transfer Capacitance	Crss			3.9		

* Pw ≦ 300 μs, Duty cycle ≦ 1%

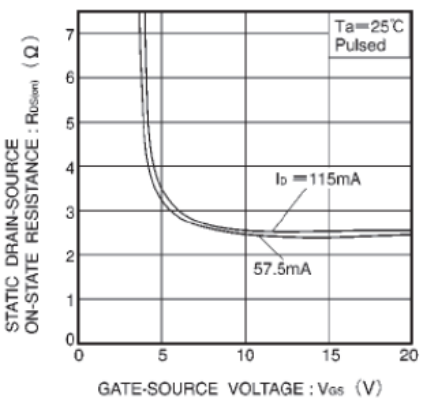
Typical Performance Characteristics



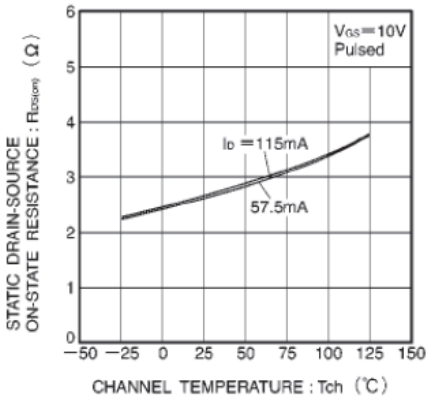
Static drain-source on-state resistance vs. drain current (Ⅰ)



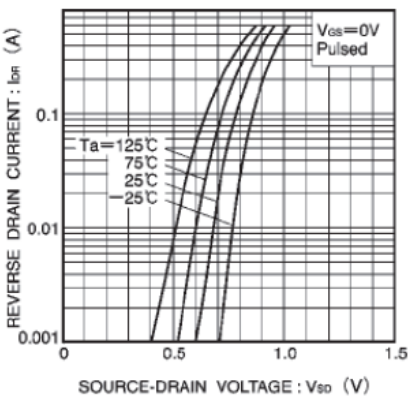
Static drain-source on-state resistance vs. drain current (Ⅱ)



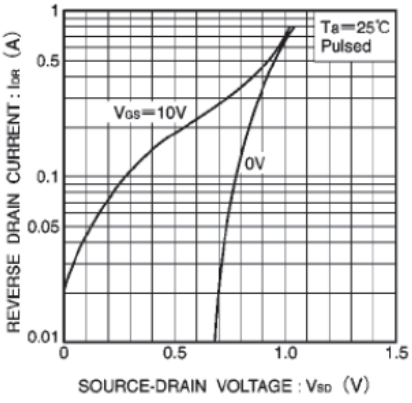
Static drain-source on-state resistance vs. gate-source voltage



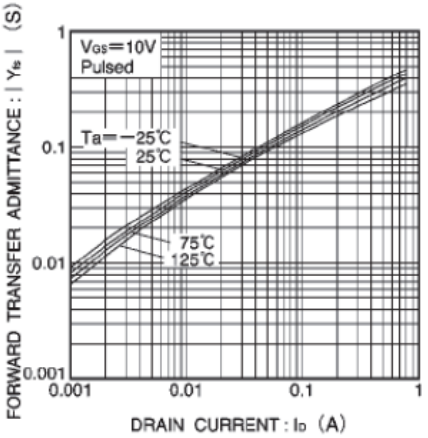
Static drain-source on-state resistance vs. channel temperature



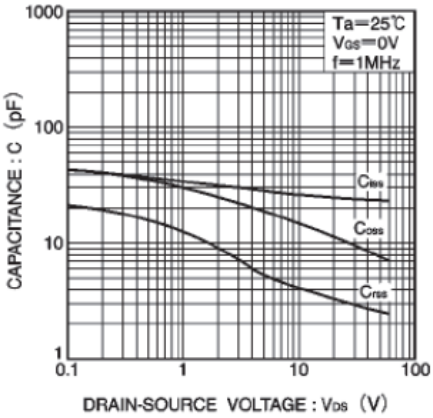
Reverse drain current vs. source-drain voltage (Ⅰ)



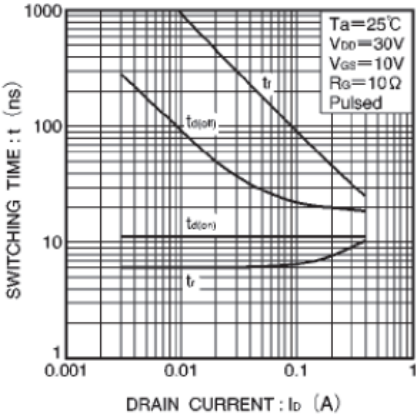
Reverse drain current vs. source-drain voltage (Ⅱ)



Forward transfer admittance vs. drain current



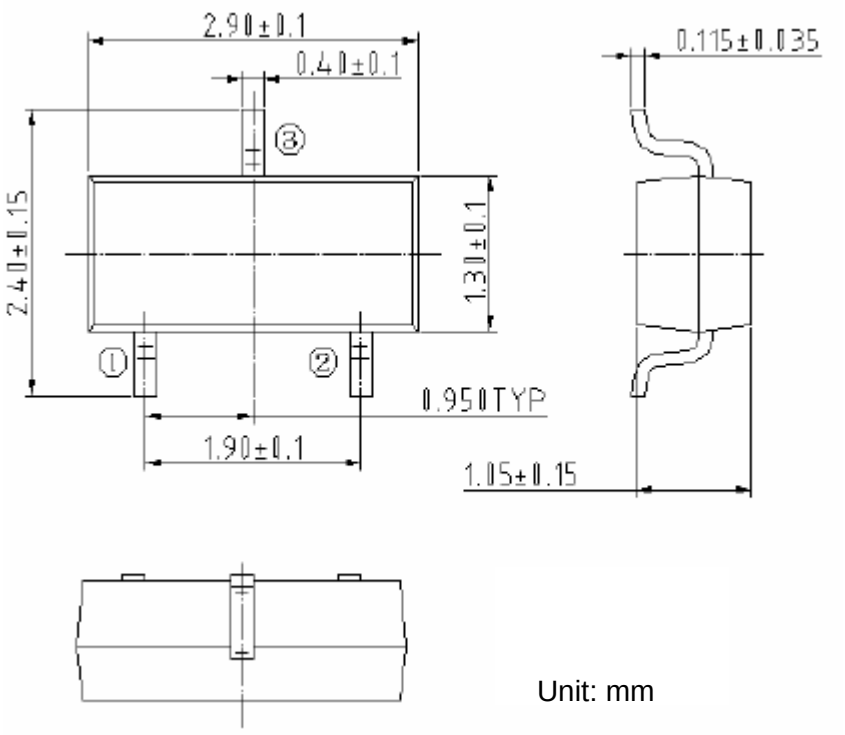
Typical capacitance vs. drain-source voltage



Switching characteristics
(See Figures 13 and 14 for the measurement circuit and resultant waveforms)

Packing Information

SOT-23-3



Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Electronics Co., LTD. As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and shoes failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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