



# ACE12311H

## N-Channel Logic Level Enhancement Mode Field Effect Transistor

### Description

ACE12311H uses advanced trench technology to provide excellent  $R_{DS(on)}$ . This device particularly suits for low voltage application such as power management of desktop computer or notebook computer power management, DC/DC converter.

### Features

- Low  $R_{DS(on)}$  provides higher efficiency and extends battery life
- Low thermal impedance copper lead frame SOT-23-3 saves board space
- Fast switching speed
- High performance trench technology

### Applications

- White LED boost converters
- Automotive Systems
- Industrial DC/DC Conversion Circuits

### Absolute Maximum Ratings

Parameter	Symbol	Limit	Units	
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V	
Continuous Drain Current	$I_D$	$T_A=25^\circ\text{C}$	8	A
		$T_A=70^\circ\text{C}$	6	
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	32	A	
Power Dissipation	$P_D$	$T_A=25^\circ\text{C}$	1.25	W
		$T_A=70^\circ\text{C}$	0.8	
Operating temperature / storage temperature	$T_J/T_{STG}$	-55~150	$^\circ\text{C}$	

### Thermal Resistance Ratings

Parameter	Symbol	Maximum	Unit
Junction-to-Ambient <sup>3</sup>	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Junction-to-Lead <sup>4</sup>	$R_{\theta JL}$	55	

1. Pulse width limited by maximum junction temperature.
2. Duty cycle  $\leq 1\%$
3.  $100^\circ\text{C} / \text{W}$  when mounted on a 1 in2 pad of 2 oz copper.
4.  $R_{\theta JA}$  is the sum of the thermal impedance from junction to lead  $R_{\theta JL}$  and lead to ambient.



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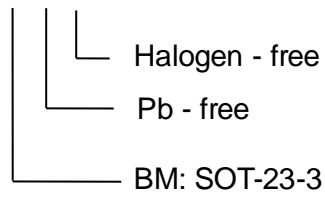
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### Product Summary:

$B_{VDSS}$	20V
$R_{DSON (MAX.)}$	11.5m $\Omega$
$I_D$	8A

### Ordering information

ACE12311H XX + H





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### 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 Technology Co., LTD. As used 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 whose 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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