



ACE3U325RT

80mΩ Low Ron Current Limited USB Power Switch

Description

The ACE3U325RT series are current limited P-channel MOSFET power switch designed for high-side load switching applications. This ACE3U325RT series operates in a wide input voltage range from 2.5V to 5.5V, making it ideal for both 3.3V and 5V systems. The ACE3U325RT integrated current-limiting circuit protects the input supply against large currents which may cause the supply to fall out of regulation. It also protects from thermal overload which limits power dissipation and junction temperatures. Current limit threshold is fixed internally.

Features

- Input Voltage Range: 2.5V to 5.5V
- Fixed Current Limit:
 - ACE3U325RTA: 0.85A (Typ.)
 - ACE3U325RTB: 1.50A (Typ.)
 - ACE3U325RTC: 2.10A (Typ.)
 - ACE3U325RTD: 2.90A (Typ.)
- Short-Circuit Response: 2μs
- Very Low Quiescent Current: 25μA (Typ)
- 1μA Max Shutdown Supply Current
- 4kV ESD Rating
- Reverse Current Blocking (RCB)
- Enable Active High
- Under-Voltage Lockout
- Thermal Shutdown
- Available in SOT-23-5 packages

Applications

- USB Keyboards, USB Hard Disk Drives, USB Hubs
- Laptops, Desktops, Servers, Printers, Docking
- Portable Media Players and MIDs
- LCD TVs & Monitors, Game Machines
- Set-Top-Boxes, GPS, Smartphones



ACE3U325RT

80mΩ Low Ron Current Limited USB Power Switch

Absolute Maximum Ratings ^(Note)

Parameter	Rating	Unit
IN, EN1, $\overline{\text{FLT}}$ Voltage	-0.3 to 6.0	V
OUT Voltage	-0.3 to $V_{\text{IN}} + 0.3$	V
OUT Current	Internal Limited	A
Power Dissipation (P_D , $T_A = 25^\circ\text{C}$)	500	mW
Package Thermal Resistance (θ_{JA})	250	$^\circ\text{C}/\text{W}$
Operating Junction Temperature (T_J)	-40 to 150	$^\circ\text{C}$
Storage Temperature	-65 to 150	$^\circ\text{C}$
Lead Temperature (Soldering, 10 sec)	300	$^\circ\text{C}$

Note:

Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. Exposure to absolute maximum rated conditions for extended periods may affect device reliability.

Recommended Operating Conditions

Symbol	Parameter	Min	Max	Unit
V_{IN}	Input Voltage	2.5	5.5	V
T_A	Ambient Operating Temperature	-40	85	$^\circ\text{C}$

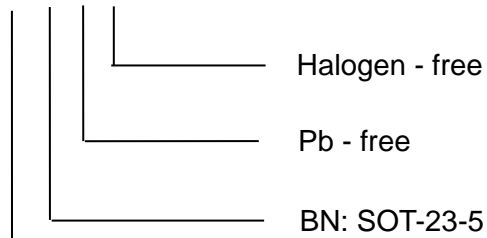


ACE3U325RT

80mΩ Low Ron Current Limited USB Power Switch

Ordering information

ACE3U325RT X XX + H



Halogen - free

Pb - free

BN: SOT-23-5

Fixed Current Limit (Typ.):

A: 0.85A (Recommendation Operating Current 0.5A)

B: 1.50A (Recommendation Operating Current 1.0A)

C: 2.10A (Recommendation Operating Current 1.5A)

D: 2.90A (Recommendation Operating Current 2.0A)



ACE3U325RT

80mΩ Low Ron Current Limited USB Power Switch

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 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 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.

ACE Technology Co., LTD.
<http://www.ace-ele.com/>