





## Absolute Maximum Ratings

Exceeding the Absolute Maximum Ratings may damage the device.

Parameter	Rating
V <sub>OUT</sub> to GND	-0.3V to +28V
V <sub>IN</sub> , EN, ILIM, FON, FLT <sub>B</sub> to GND	0V to +6V
Junction Temperature (T <sub>J</sub> )	+150°C
Storage Temperature (T <sub>S</sub> )	-65°C to +150°C
ESD Rating HBM/CDM	±4kV / ±1kV

## Recommended Operating Ratings

The device is not guaranteed to operate beyond the Maximum Operating Ratings.

Parameter	Rating
V <sub>IN</sub> to GND	3.4V to 5.5V
FON, EN, FLT <sub>B</sub> to GND	0V to 5.5V
Switch Current (I <sub>SW</sub> )	0A to 3.5A
ILIM	0V to 2V
Ambient Temperature (T <sub>A</sub> )	-40°C to +85°C
Package Thermal Resistance	84°C/W

## Electrical Characteristics

T<sub>A</sub> = 25°C, V<sub>IN</sub> = 5V, V<sub>EN</sub> = 5V, V<sub>FON</sub> = 0V unless otherwise specified.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
<b>General</b>						
V <sub>IN</sub>	Input Supply Voltage	AOZ1356LI-01 and -02	3.4		5.5	V
		AOZ1356LI-05 and -06	3.6		5.3	V
V <sub>UVLO_R</sub>	Under-voltage Lockout Threshold	V <sub>IN</sub> rising AOZ1356LI-01 and -02	3	3.25	3.35	V
		V <sub>IN</sub> rising AOZ1356LI-05 and -06	3.2	3.45	3.55	V
V <sub>UVLO_HYS</sub>	Under-voltage Lockout Hysteresis	V <sub>IN</sub> falling		150		mV
I <sub>IN_ON</sub>	Input Quiescent Current	I <sub>OUT</sub> = 0A, FON = 0V, V <sub>EN</sub> = 5V		125		µA
I <sub>IN_FON</sub>	FON Standby Current	FON = 5V, V <sub>EN</sub> = 0V		135		mA
I <sub>IN_OFF</sub>	Input Shutdown Current	EN = 0V, FON = 0V		6	10	µA
R <sub>ON</sub>	Switch On Resistance	I <sub>OUT</sub> = 1A		34		m
V <sub>EN_H</sub>	Enable Input Logic High Threshold	EN rising	1.4			V
V <sub>EN_L</sub>	Enable Input Logic Low Threshold	EN falling			0.4	V
I <sub>EN_BIAS</sub>	Enable Input Bias Current	EN = 1.8V		1	1.5	µA
V <sub>FON_H</sub>	Fast-On Logic High Threshold	FON rising	1.4			V
V <sub>FON_L</sub>	Fast-On Logic Low Threshold	FON falling			0.4	V
I <sub>FON_BIAS</sub>	Fast-On Input Bias Current	V <sub>FON</sub> = 1.8V		1.5	4.0	µA
V <sub>FLT<sub>B</sub>_LO</sub>	FLT <sub>B</sub> Pull-down Voltage	I <sub>SINK</sub> = 3mA			0.3	V
<b>Over-Voltage Protection</b>						
V <sub>OVLO_R</sub>	Over-voltage Lockout Threshold	V <sub>IN</sub> rising AOZ1356LI-01 and -02	5.6	5.8	6	V
V <sub>OVLO_F</sub>		V <sub>IN</sub> rising AOZ1356LI-05 and -06	5.75	5.9		
V <sub>OVLO_HYS</sub>	Over-voltage Lockout Hysteresis			250		mV
V <sub>OUT_OVLO</sub>	Output Over-Voltage Lockout Threshold	AOZ1356LI-05 and -06	5.3		5.5	V
T <sub>DELAY_OVP</sub>	OVP Turn-Off Delay			2		µs



























