APPLICATION NOTES

External Capacitance

External capacitors are necessary in order to guarantee stability and full parametric performance over the full line and load range. All parts have been tested and characterised using the following values and test circuit.

Value	
C_{IN}	C_{OUT}
100µF, 50V	100µF, 10V

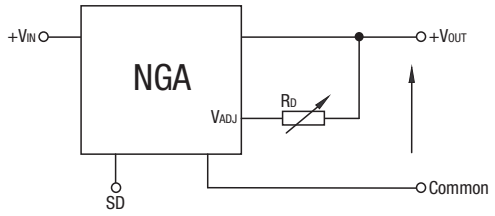
Voltage trimming

The trimming (adjust) input on the device allows output voltage adjustment to within ±5%[1] of the desired V_{OUT} using a resistor with a value determined by the following equations.

When open circuit, the output will be +5V.

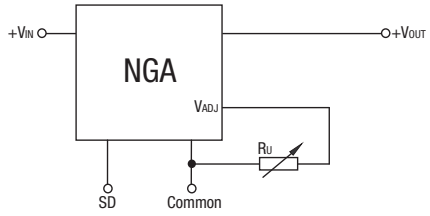
A resistor (R_D) between the trim pin and the output pin will adjust the output voltage between +5V to +1.8V.

$$\frac{1}{R_D} = (22\,[1.028V_O\text{-}1])^{-1}\text{-}0.011$$

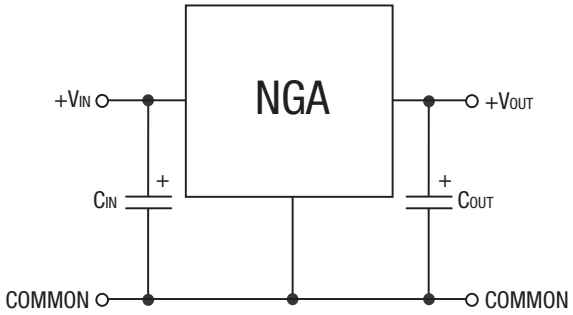


A resistor (R_U) between the trim pin and the Common pin will adjust the device output from +5V to +5.5V.

$$\frac{1}{R_U} = \left(\frac{(1.02V_O)\text{-}1}{91}\right)\text{-}0.0455$$



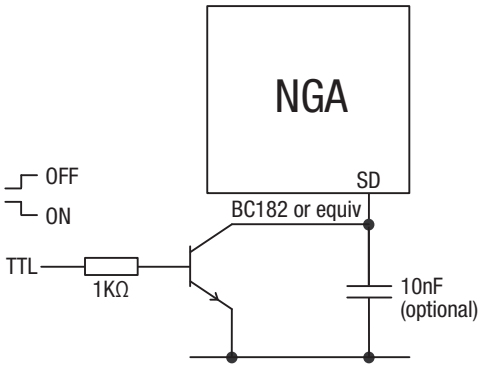
Test Circuit



Shutdown

When the shutdown pin is shorted to Common, the device's output will be disabled. To shutdown the device the pin should be taken below 0.8V using either an open collector pull down or by using isolated delay contacts. To enable the device output the shutdown pin should be left floating or taken no lower than +1.5V to a maximum of (+28V).

If the shutdown pin is to be connected to a long wire, it is recommended that a capacitor (10nF) decouples the shutdown pin to Common in order to avoid the risk of injecting noise into the device circuit.



All specifications typical at T_A=25°C, nominal input voltage and rated output current unless otherwise specified.

1. Accuracy of adjustment is subject to tolerance of resistors and initial output accuracy.

MEAN TIME TO FAILURE (MTTF)[1]

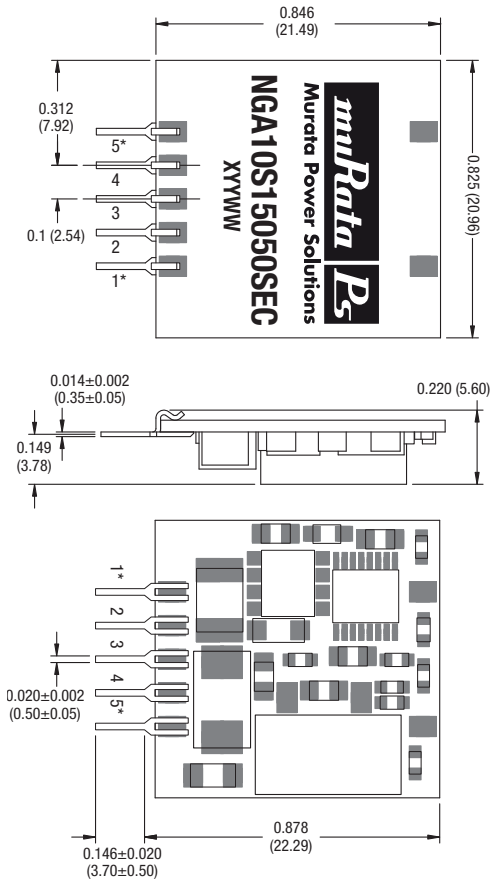
Part number	25ºC	Units
NGA10S15018	1464	KHrs
NGA10S15025	1463	
NGA10S15033	1463	
NGA10S15050	1461	

TERMINOLOGY

Transient Response	Over-Shoot/Under-Shoot	Start Delay
Time for V_{OUT} to be within 1% of V_{NOM} where: $V_{NOM} = \frac{V_{OUT}\ 25\% + V_{OUT}\ 75\%}{2}$	Max. deviation from final steady state output.	Typical rise time (ms) after control pin high with valid input.

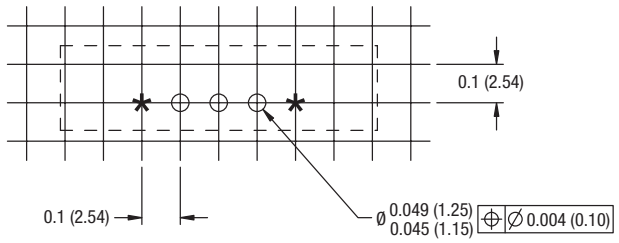
PACKAGE SPECIFICATIONS

MECHANICAL DIMENSIONS - SIP PACKAGE



All dimensions in inches ±0.01 (mm ±0.25mm).
All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.

RECOMMENDED FOOTPRINT



All dimensions in inches ±0.01 (mm ±0.25mm).
All pins on a 0.1 (2.54) pitch and within ±0.01 (0.25) of true position.

PIN CONNECTIONS

Pin	Function
1*	SD
2	$+V_{IN}$
3	COMMON
4	$+V_{OUT}$
5*	V_{ADJ}

Weight: 4.0g
* Optional pins available on NGA10S15050SEC only

1. Calculated using MIL-HDBK-217F with nominal input voltage at full load.