# **DATASHEET**

# **ULTRACAPACITOR CELL INTEGRATION KIT**

## **FEATURES AND BENEFITS**

- Simple design and assembly
- > Maximizes system lifetime
- Protects individual ultracapacitors against over voltage
- > For 2, 4, or 6 K2 Series ultracapacitors connected in series
- Compatible with ultracapacitors rated at 2.7V and 2.85V

## **TYPICAL APPLICATIONS**

- Fast prototyping
- > Application specific modules



# **PRODUCT SPECIFICATIONS**

ELECTRICAL	BKIT-MCINT	BKIT-MCIHT
Turn-on threshold ( $V_{On}$ )	2.6 ± .05 V	-
Turn-off threshold	$(V_{on} - 0.03)$ to $(V_{on} - 0.1)$ V	-
On-state current	225 ± 25 mA	-
Off-state current	< 60 uA	-
Allowable operating voltage range	-1.0 V to 3.0 V	-
Balancing resistor value	-	49.9 Ω

 	$\neg$		 
	-48		
		NM	

Operating Temperature Range	-40°C to +65°C	-40°C to +65°C
Humidity		
Non-condensing at +25°C	0% to 90%	0% to 90%
Non-condensing at +50°C	0% to 70%	0% to 70%



## **ULTRACAPACITOR CELL INTEGRATION KIT**

#### INCLUDED IN INTEGRATION KIT PACKAGE

3 x Rivets (AD41-43ABS, 1100 Aluminum)

3 x PCBA (93.4 x 38.1mm)

6 x Buss Bars (31.8 x 94.8 x 3.2mm, 6061 Aluminum)

12 x Washers (M12 DIN137B Steel)

12 x Retaining Nuts (M12-1.75 x 6mm Steel)

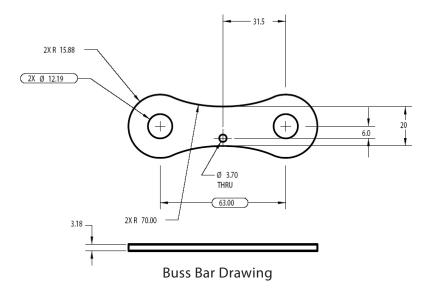
#### ORDERING INFORMATION

Integration Kit with active PCBA:
BKIT-MCINT (Part number 106927)
Integration Kit with passive PCBA:
BKIT-MCIHT (Part number 108320)

### MOUNTING RECOMMENDATIONS

For complete assembly instructions please refer to the Integration Kit User Manual (document number 1011158). Torque each connection to  $12 \pm 2$  Nm.

Maxwell Technologies cell balance boards are designed to limit any over voltage of the individual capacitors during proper rated system use. The circuit is capable of sinking up to 250mA of current to reduce over voltage on cells. When cells are balanced, the circuit draws less than  $60\mu A$  (approximately 1% of the typical leakage current of a 3000 F cell). There is no need to externally control the circuit.



<sup>\*</sup>Refer to user manual for product variant details.

Product dimensions are in millimeters and for reference only unless otherwise identified. Product dimensions and specifications may change without notice. Please contact Maxwell Technologies directly for any technical specifications critical to application. All products featured on this datasheet are covered by the following U.S. patents and their respective foreign counterparts: 6643119, 7295423, 7342770, 7352558, 7384433, 7440258, 7492571, 7508651, 7791860, 7791861, 7816891, 7859826, 7883553, 7935155, 8072734, 8098481, 8279580, and patents pending.



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