

TITAN[®] 2.85@65°C 60mm Axial Cells

FEATURES

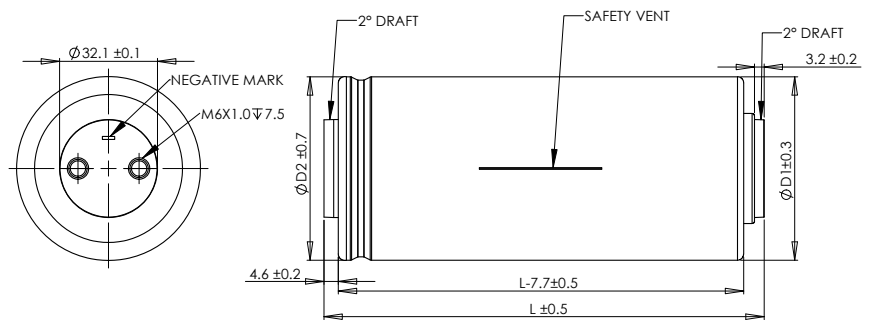
Made in USA
Weldable screw terminals
Highest power available
RoHS compliant
Long life
Wide temperature operating range
2.85V Operation

APPLICATIONS

High power
High rate cycling
High cycle life (>1,000,000 cycles)
System prototyping/testing with available integration kit (iKIT60MM2V7A2S)

MARKETS

Automotive subsystem
Engine starting
Regen energy capture
Backup power
Grid/power correction
UPS/ride through power



MARKINGS

Products are marked with the following: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal marking, maximum energy content.

MOUNTING RECOMMENDATION

Do not reverse polarize. Install following recommendations in *Notes on Using Ultracapacitors*, available at www.ioxus.com. Contact your Ioxus representative for ordering and application information regarding sizing and to purchase integration kits

PRODUCT SPECIFICATIONS

ELECTRICAL/PART NUMBER	iRD1200F285CT	iRD2000F285CT	iRD3000F285CT
Capacitance (F) [Min/ Nom]	1152/ 1200	1920/ 2000	2880/ 3000
Voltage (Rated/Surge) [V_R /V _S]	2.85 /3.0	2.85 /3.0	2.85 /3.0
DC ESR 10ms (mΩ) [Nom /Max]	0.27 /0.32	0.22 /0.30	0.20 /0.28
IEC DC ESR (mΩ) [Nom /Max]	0.42 /0.51	0.29 /0.35	0.25 /0.31
AC ESR(mΩ 1kHz) [Nom /Max]	0.26 /0.32	0.22 /0.28	0.20 /0.26
Inductance (nH) <i>Reference Only</i>	60	60	60
72hr Leakage ≤(mA) 2.7V /2.85V	1.7	3.7	4.5
CYCLING (Calculated from nominal values)			
Current, Peak [1s] (A)	1300	2000	2700
Continuous Current (A) [20°Rise]	112	122	134
Current, Short Circuit (A)	10,500	12,900	14,200
THERMAL (Reference)			
Operational / Storage Range (°C)	-40 to 65°C / -40 to 70°C		
Resistance, Thermal (°C/W) [R _{TH}]	5	4.5	4
ENERGY/POWER (Reference / Calculated using nominal values)			
E _{MAX} (Whr) [Min/ Nom]	1.30/ 1.35	2.17/ 2.26	3.25/ 3.38
E _{MAX} (Whr/kg)	4.6	5.8	6.6
E _{MAX} (Whr/L)	5.9	7.3	8.3
P _{MAX} Impedance Matched Power (kW/kg)	26	24	20
P _{MAX} Impedance Matched Power (kW/L)	34	30	25
Usable P _d (kW/kg)	12	11.4	9.6
PHYSICAL (Nominal Values)			
D1 (mm) (+/- 0.3)		60.2	
D2 (mm) (+/- 0.7)		60.7	
L (mm) (+/- 0.5)	80	108.1	144
Mass (kg)	0.295	0.390	0.510
Volume (L) (CALCULATED)	0.228	0.308	0.410
Terminal Fastener Size / Max Torque	M6X1 / 5Nm (44in/lbs)		
LIFE (EOL Criteria) [Capacitance/IEC DC ESR] *Life is a provisional value			
DC (10 Yr, 25°C, @V _R) [F /mΩ]	> 920 / <1.0	> 1530 / <0.70	> 2300 / <0.62
Endurance (2000 hr, 65°C, @2.85v) [F /mΩ]	> 920 / <1.0	> 1530 / <0.70	> 2300 / <0.62
Storage (4 yr, 25°C, @ 0v) [F /mΩ]	> 1030 / <0.77	> 1720 / <0.53	> 2590 / <0.47
Cycle (1M Cyc, 25°C, @ V _R -V _R /2) [F /mΩ]	> 920 / <1.0	> 1530 / <0.70	> 2300 / <0.62
STANDARDS COMPLIANCE (UNDERLINED ITEMS ARE PENDING)			
Safety/Environmental	RoHS, UL810a, Chinese RoHS, IEC 60068-2-14, SAE J2464		
Shock	IEC 60068-2-27		
Vibration	SAE J2380, ISO 16750-3 (Table 12), IEC 60068-2-6		

ADDITIONAL TECHNICAL INFORMATION

Product specification test and calculation methods are available in *Ioxus Notes on Datasheet Specifications*

