



Solid Tantalum Chip Capacitors MICROTAN[®] High Reliability Leadframeless Molded Capacitors TM8 and DLA 11020

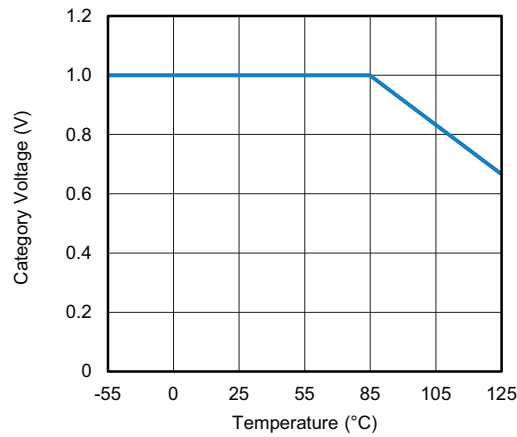
ELECTRICAL PERFORMANCE CHARACTERISTICS				
ITEM	PERFORMANCE CHARACTERISTICS			
Category temperature range	-55 °C to +85 °C (to +125 °C with voltage derating)			
Capacitance tolerance	± 20 %, ± 10 %, tested via bridge method, at 25 °C, 120 Hz			
Dissipation factor	Limits per Standard Ratings table. Tested via bridge method, at 25 °C, 120 Hz.			
ESR	Limits per Standard Ratings table. Tested via bridge method, at 25 °C, 100 kHz.			
Leakage current	After application of rated voltage applied to capacitors for 5 min using a steady source of power with 1 kΩ resistor in series with the capacitor under test, leakage current at 25 °C is not more than described in Standard Ratings table. <i>Note that the leakage current varies with temperature and applied voltage. See graph below for the appropriate adjustment factor.</i>			
Reverse voltage	Capacitors are capable of withstanding peak voltages in the reverse direction equal to: 10 % of the DC rating at +25 °C 5 % of the DC rating at +85 °C 1 % of the DC rating at +125 °C Vishay does not recommend intentional or repetitive application of reverse voltage.			
Ripple current and Temperature derating	For maximum permissible ripple current (I _{RMS}) or/and voltage (V _{RMS}) please refer to product datasheet and Guide to Application. If capacitors are to be used at temperatures above +25 °C, the permissible RMS ripple current or voltage shall be calculated using the derating factors: 1.0 at +25 °C 0.9 at +85 °C 0.4 at +125 °C			
Maximum operating and surge voltages vs. temperature	+85 °C		+125 °C	
	RATED VOLTAGE	SURGE VOLTAGE	CATEGORY VOLTAGE	SURGE VOLTAGE
	V	V	V	V
	2.0	2.6	1.3	1.7
	4.0	5.2	2.7	3.4
	6.3	8.0	4.0	5.0
	10	13	7.0	8.0
	16	20	10	12
	20	26	13	16
	25	32	17	20
	35	46	23	28
40	52	26	31	

Notes

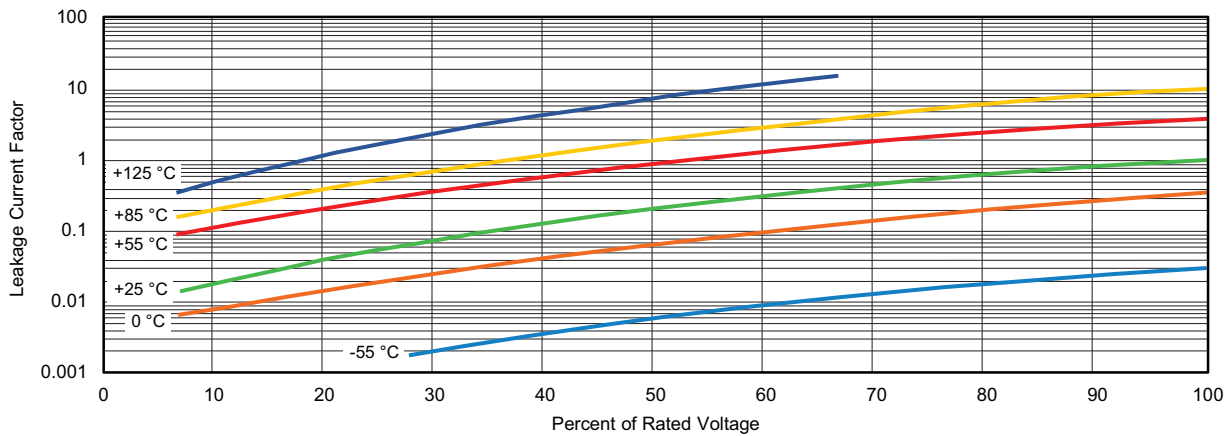
- All information presented in this document reflects typical performance characteristics
- For information about recommended voltage derating see: www.vishay.com/doc?40246
- For temperatures above +85 °C the voltage derating ratio should be applied with respect to category voltage, namely: up to +85 °C: category voltage = rated voltage; at +125 °C: category voltage = 2/3 of rated voltage, between these temperatures it decreases linearly - see graph "Category to Rated Voltage Ratio vs. Operating Temperature"



CATEGORY VOLTAGE VS. TEMPERATURE



TYPICAL LEAKAGE CURRENT TEMPERATURE FACTOR



Notes

- At +25 °C, the leakage current shall not exceed the value listed in the Standard Ratings table.
- At +85 °C, the leakage current shall not exceed 10 times the value listed in the Standard Ratings table.
- At +125 °C, the leakage current shall not exceed 12 times the value listed in the Standard Ratings table



ENVIRONMENTAL AND MECHANICAL PERFORMANCE CHARACTERISTICS		
ITEM	CONDITION	POST TEST PERFORMANCE
Vibration	In accordance with MIL-PRF-55365	In accordance with MIL-PRF-55365 (as for style CWR15)
Thermal shock		
Resistance to solder heat		
Moisture resistance		
Stability at low and high temperatures		
Surge voltage		
Life test		
Solderability		
Resistance to solvents		
Terminal strength/ Shear stress test		
Flammability	Encapsulation materials meet UL 94 V-0 with an oxygen index of 32 %.	

Note

- All measurements to be performed after 24 h conditioning at room temperature.