



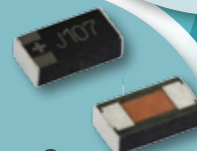
Vishay Intertechnology, Inc.

Tantalum Capacitors

**T18
WET TANTALUM**
High Capacitance, High
Performance



**T58
MICROTAN[®]
POLYMER**
Small Size, High
Capacitance



**T22
WET TANTALUM SMD**
Tantalum Metal Case,
Hermetic Package Design



**TP3
MOLDED
TANTALUM**
High Performance,
Automotive Grade



**T55
POLYMER**
New Low-ESR
Polymer Capacitor



**T59
LEADFRAMELESS
POLYMER**
Ultra-low ESR
High Capacitance



**597D
CONFORMAL
COATED TANTALUM**
Highest Capacitance
Available in SMD
Tantalum



**TM3
MOLDED
TANTALUM**
High Reliability for
Medical Instruments





TANTALUM CAPACITORS

Focus Products

Polymer Chip Capacitors

Series	Capacitance Range	Voltage	ESR	Case Sizes	Operating Temperature
 T55	3.3 μ F to 680 μ F	2.5 V _{DC} to 35 V _{DC}	12 m Ω to 500 m Ω	1608, 2012, 3216, 3528, 7343-30, 7343-20	-55 °C to +105 °C
Polymer cathode system offers low ESR and eliminates ignition failure mode					

Leadframeless Polymer Capacitors

Series	Capacitance Range	Voltage	ESR	Case Sizes	Operating Temperature
 T58	10 μ F to 330 μ F	4 V _{DC} to 25 V _{DC}	50 m Ω to 500 m Ω	1608 to 3528	-55 °C to +105 °C
Smallest and lowest profile polymer tantalum capacitor; best-in-class ESR					
 T59	10 μ F to 470 μ F	16 V _{DC} to 75 V _{DC}	25 m Ω to 150 m Ω	7343-43	-55 °C to +105 °C
Extended capacitance and voltage range; ultra-low ESR					

MICROTAN®

Series	Capacitance Range	Voltage Range	Case Sizes	Operating Temperature
 TP8	1.0 μ F to 100 μ F	6.3 V _{DC} to 40 V _{DC}	1608 up to 3528	-55 °C to +125 °C
AEC-Q200 micro tantalum chip capacitors for space-constrained automotive applications				
 TM8	0.68 μ F to 47 μ F	2 V _{DC} to 40 V _{DC}	1005 up to 3528	-55 °C to +125 °C
High-reliability micro tantalum chip capacitors for military and medical applications; ISO-13485-qualified				

TANTAMOUNT® Solid Tantalum Surface-Mount Chip Capacitors

Series	Qualification	Capacitance Range	Voltage Range	Case Size	Operating Temperature
 TP3	AEC-Q200	0.10 μ F to 470 μ F	4 V _{DC} to 50 V _{DC}	A to E	-55 °C to +125 °C
Molded case; high performance, automotive grade					
 TH3	AEC-Q200	0.33 μ F to 220 μ F	6.3 V _{DC} to 50 V _{DC}	A to E	-55 °C to +150 °C
Molded case; high temperature to 150 °C, automotive grade					
 TH4	AEC-Q200	10 μ F to 47 μ F	6.3 V _{DC} to 16 V _{DC}	B, C, and D	-55 °C to +175 °C
Molded case; high temperature to 175 °C; automotive grade					
 TM3	ISO 13485	1 μ F to 220 μ F	4 V _{DC} to 20 V _{DC}	A to E	-55 °C to +125 °C
Molded case; high reliability, and low DCL for medical instruments					
 T83	RoHS available	0.10 μ F to 470 μ F	4 V _{DC} to 63 V _{DC}	A to E	-55 °C to +125 °C
Molded case; Hi-Rel COTS					
 TL3	EIA 717	0.10 μ F to 470 μ F	4 V _{DC} to 50 V _{DC}	A to E	-55 °C to +125 °C
Molded case; very low DCL					
 TR3	EIA 717	0.47 μ F to 1000 μ F	4 V _{DC} to 75 V _{DC}	A to E, V, and W	-55 °C to +125 °C
Molded case; low ESR					
 TF3		0.47 μ F to 470 μ F	4 V _{DC} to 50 V _{DC}	C, D, and E	-55 °C to +125 °C
Molded case; built-in-fuse					
 TH5		4.7 μ F and 10 μ F	21 V _{DC} and 24 V _{DC}	E	-55 °C to +200 °C
Molded case; HI TMP®; very high temperature 200 °C					



TANTALUM CAPACITORS

Focus Products

Wet Tantalum Capacitors

Series	Qualification	Capacitance Range	Voltage Range	Case Size	Operating Temperature	Termination Style
 STE	DLA 10004	18 μ F to 10 000 μ F	10 V _{DC} to 125 V _{DC}	T1, T2, T3, T4	-55 °C to +125 °C	Axial leaded
Tantalum case; extended capacitance						
 T16	DLA 13017	10 μ F to 1800 μ F	25 V _{DC} to 125 V _{DC}	T1, T2, T3, T4	-55 °C to +125 °C	Axial leaded
Tantalum case; high capacitance; high performance						
 T18	DLA 15005	10 μ F to 2200 μ F	50 V _{DC} to 125 V _{DC}	T1, T2, T3, T4	-55 °C to +125 °C	Axial leaded
Tantalum case; extended capacitance; high performance						
 134D		10 μ F to 680 μ F	50 V _{DC} to 125 V _{DC}	T1, T2, T3, T4	-55 °C to +200 °C	Axial leaded
Tantalum case; high capacitance; high temperature						
 HE3	DLA 10011	1100 μ F to 72 000 μ F	25 V _{DC} to 125 V _{DC}	A, B, C	-55 °C to +125 °C	Radial leaded
Tantalum case; ultra-high capacitance; high energy						
 HE5		1100 μ F to 72 000 μ F	25 V _{DC} to 125 V _{DC}	A, B, C	-55 °C to +125 °C	Radial leaded
Tantalum case; ultra-high capacitance; high energy; low ESR						

Conformal Coated

Series	Capacitance Range	Voltage	ESR	Case Sizes	Operating Temperature
 597D, Hi-Rel COTS T97	10 μ F to 1500 μ F	4 V _{DC} to 75 V _{DC}	18 m Ω to 100 m Ω	7.6 mm x 4.4 mm 7.6 mm x 6 mm 8.0 mm x 6 mm height: 2 mm up to 6 mm	-55 °C to +125 °C
Highest capacitance and voltages available in SMD tantalum; Hi-Rel COTS T97 also available as DLA 13008					
 595D, Low-ESR 594D	0.1 μ F to 1500 μ F	4 V _{DC} to 50 V _{DC}	0.03 Ω to 10 Ω	2.2 mm x 1.1 mm up to 7.2 mm x 6.0 mm	-55 °C to +125 °C
Wide range of capacitance and voltages; low-ESR 594D					
 Hi-Rel COTS T95	0.1 μ F to 1500 μ F	4 V _{DC} to 50 V _{DC}	0.03 Ω to 10 Ω	2.2 mm x 1.1 mm up to 7.2 mm x 6.0 mm	-55 °C to +125 °C
High-reliability version of 595D / 594D series; also available as DLA 14002					
 Low-Profile 592D	1 μ F to 2200 μ F	4 V _{DC} to 50 V _{DC}	0.04 Ω to 8 Ω	3.5 mm x 1.6 mm up to 14.5 mm x 7.4 mm height: 2 mm and below	-55 °C to +125 °C
Low profile; maximum capacitance					

Hermetic Solid Tantalum Surface-Mount Chip Capacitors

Series	Capacitance Range	Voltage	ESR	Case Sizes	Operating Temperature
 T25	22 μ F to 330 μ F	16 V _{DC} to 50 V _{DC}	180 m Ω to 500 m Ω	D	-55 °C to +125 °C
Metal case; hermetically sealed; SMD; solid tantalum; low ESR					

Hermetic Wet Tantalum Surface-Mount Chip Capacitors

Series	Capacitance Range	Voltage	ESR	Case Sizes	Operating Temperature
 T22	10 μ F to 68 μ F	50 V _{DC} to 125 V _{DC}	1.5 Ω to 5.5 Ω	C	-55 °C to +125 °C
Tantalum case; hermetically sealed; SMD; enhanced performance; high reliability					

TANTALUM CAPACITORS OFFER STABLE PERFORMANCE AND RELIABILITY FOR THE MOST DEMANDING APPLICATIONS



Advantages of Vishay Tantalum Capacitors

- Stable performance over operating temperature, voltage range, and life (no wear-out)
- Specialized for key applications: commercial, industrial, military, medical, automotive, and space
- Wide range of capacitance and voltages
- Large selection of styles and sizes

For the Following Applications

- Power conversion and distribution
- Energy storage; bulk capacitance
- Filtering



When reliability and performance are critical, Vishay's tantalum capacitors deliver



AEC-Q200 tantalum capacitors are the industry's choice for high-capacitance solutions in automotive applications



Useful Links

- FIT calculator program:
www.vishay.com/capacitors/tantalum-reliability-calculator-list/
- Solid tantalum capacitor selector guide:
www.vishay.com/doc?49053

Market and technology leader in conformal-coated tantalum capacitors

EIA-717

**HALOGEN
FREE**

**RoHS
COMPLIANT**

**AEC-Q200
QUALIFIED**

ISO 13485

MIL-PRF

DLA



**AUTOMOTIVE
GRADE**

A **WORLD OF**
SOLUTIONS