



# Product Change Notification



Product Group: Vishay Tantalum capacitors / January 7, 2020 / PCN-TC-006-2019 Rev 1

## Change of anode terminal design and unification of A & B case Cu lead frame

**DESCRIPTION OF CHANGE:** Minor terminal design change

**CLASSIFICATION OF CHANGE:** Terminal design

**REASON FOR CHANGE:** Simplification of process by unifying slitless and A & B case Cu lead frame

**EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE:** No influence

**PRODUCT CATEGORY:** Tantalum capacitors

**PART NUMBERS/SERIES/FAMILIES AFFECTED:** T55 series, A and B case

**VISHAY BRAND(s):** Vishay Polytech

**TIME SCHEDULE:**

Start Shipment Date: April 1, 2020

**SAMPLE AVAILABILITY:** upon request

**PRODUCT IDENTIFICATION:** Based on date code

**QUALIFICATION DATA:** Data is available upon request

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before February 6, 2020 or as specified by contract.**

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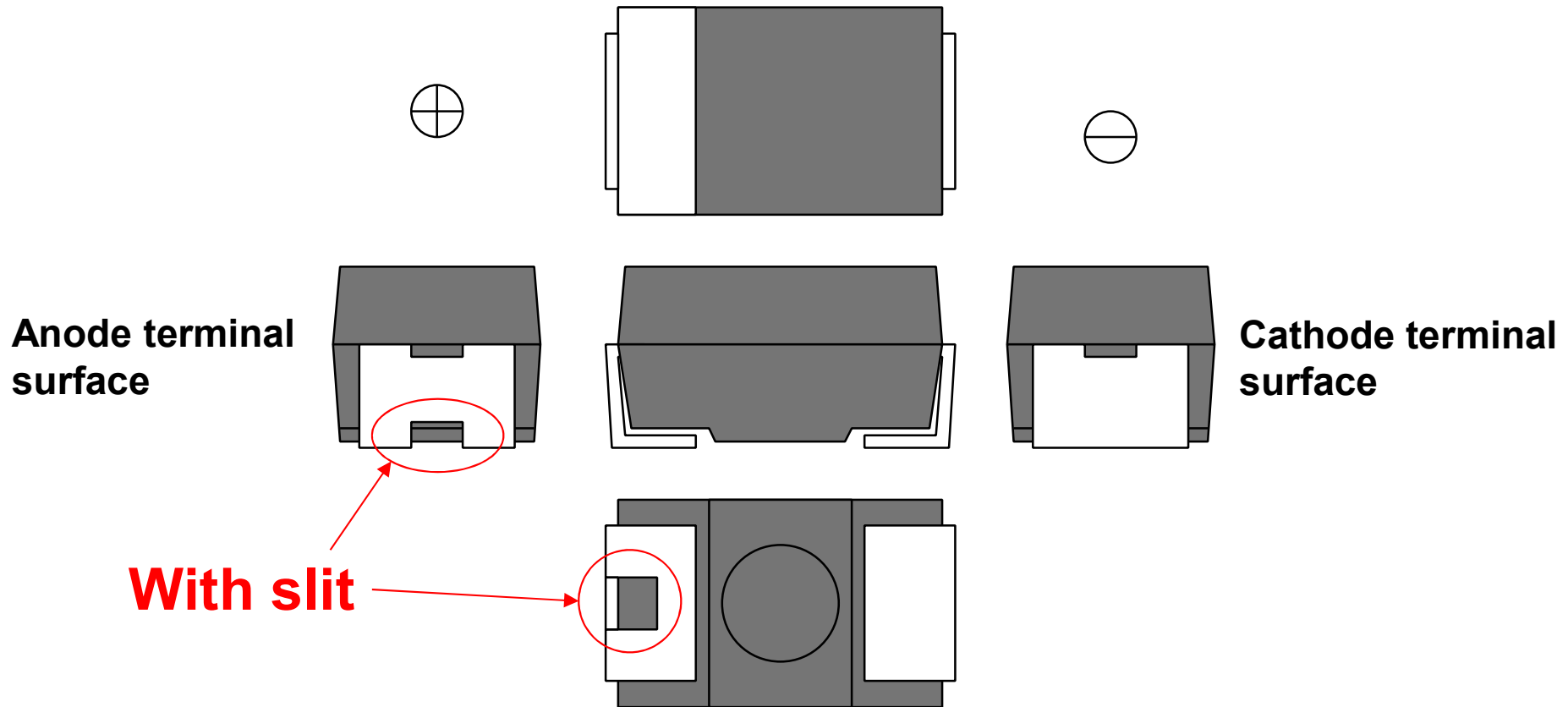
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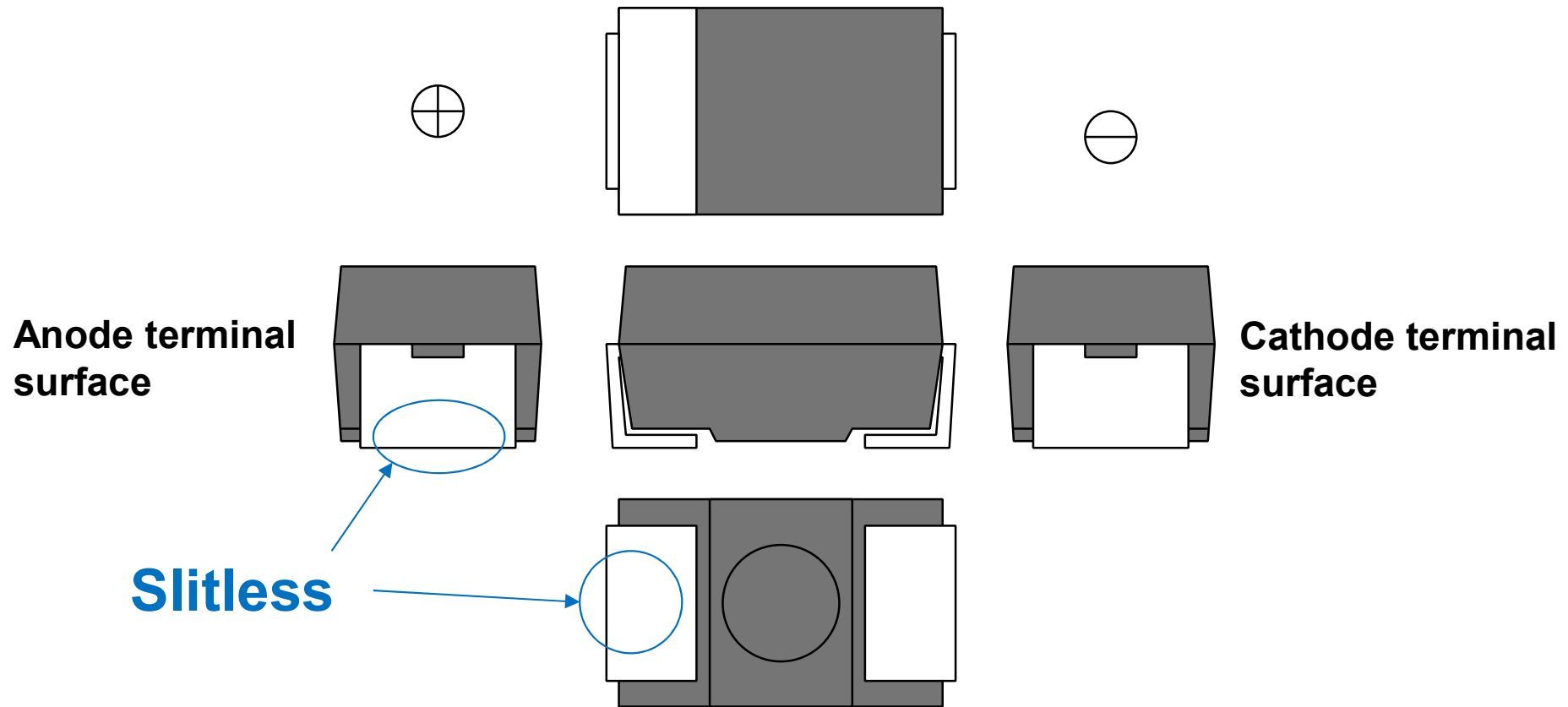
ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENT



# T55 (A&B case) PREVIOUS TERMINAL DESIGN (Anode terminal)



# T55 (A&B case) NEW TERMINAL DESIGN (Anode terminal)





# 1. Solderability test result

## 1. Solderability

p/n	Lot #	Note
T55A107M6R3C0045	89A493	With Slit
T55A107M6R3C0045	98Z002B	Slitless
T55B156M025C0100	98A589	With Slit
T55B156M025C0100	98Z001	Slitless

### Sample Size: 10

Test	Reference	Test Conditions
Solderability	JIS C 5101 - 1 subclause 4.15	Solder dipping 230±2°C, 3sec Without pre-heat

### Test Results:

Type	Appearance	Result	Note
100µF +/-20% 6.3V, A Case Size	OK	Pass	With Slit
100µF +/-20% 6.3V, A Case Size	OK	Pass	Slitless
15µF +/-20% 25V, B Case Size	OK	Pass	With Slit
15µF +/-20% 25V, B Case Size	OK	Pass	Slitless



# 2. Terminal Strength test result

## 2. Terminal Strength (SMD)

p/n	Lot #	Note
T55A107M6R3C0045	89A493	With Slit
T55A107M6R3C0045	98Z002B	Slitless
T55B156M025C0100	98A589	With Slit
T55B156M025C0100	98Z001	Slitless

**Sample Size: 30**

Test	Reference	Test Conditions
Terminal Strength (SMD)	AEC-Q200-006	17.7N for 60 seconds

### Test Results:

Type	Appearance	Result	Note
100 $\mu$ F +/-20% 6.3V, A Case Size	OK	Pass	With Slit
100 $\mu$ F +/-20% 6.3V, A Case Size	OK	Pass	Slitless
15 $\mu$ F +/-20% 25V, B Case Size	OK	Pass	With Slit
15 $\mu$ F +/-20% 25V, B Case Size	OK	Pass	Slitless



# 3. Board Flex test result

## 3. Board Flex

p/n	Lot #	Note
T55A107M6R3C0045	89A493	With Slit
T55A107M6R3C0045	98Z002B	Slitless
T55B156M025C0100	98A589	With Slit
T55B156M025C0100	98Z001	Slitless

### Sample Size: 10

Test	Reference	Test Conditions
Board Flex	JIS C 5101 - 1 subclause 4.35	2.0 mm for 60 seconds

### Test Results:

Type	Appearance	Result	Note
100 $\mu$ F +/-20% 6.3V, A Case Size	OK	Pass	With Slit
100 $\mu$ F +/-20% 6.3V, A Case Size	OK	Pass	Slitless
15 $\mu$ F +/-20% 25V, B Case Size	OK	Pass	With Slit
15 $\mu$ F +/-20% 25V, B Case Size	OK	Pass	Slitless



# 4. Vibration, Mechanical Shock sequence

## 4. Vibration, Mechanical Shock sequence

### 4-1. Mechanical Shock

p/n	Lot #	Test method	Test Conditions	Sample size/ Allowed failures	Note
T55A107M6R3C0045	98Z002B	MIL-STD-202 Method 213 Condition F	0.5ms pulse, 1500g	30 / 0	Slitless
T55B156M025C0100	98Z001			30 / 0	Slitless

### 4-2. Vibration

p/n	Lot #	Test method	Test Conditions	Sample size/ Allowed failures	Note
T55A107M6R3C0045	98Z002B	MIL-STD-202 Method 204	20g, 4h on each of 3 axis	30 / 0	Slitless
T55B156M025C0100	98Z001			30 / 0	Slitless



# 4. Vibration, Mechanical Shock sequence

## 4-1. Mechanical Shock sequence

### Test Results:

**Tested part number: 100 $\mu$ F +/-20% 6.3V, A Case Size**

	Cap ( $\mu$ F)	DF (%)	DCL ( $\mu$ A)
Minimum	95.995	3.202	3.939
Maximum	98.831	3.897	15.445
Mean	97.526	3.457	5.004
St. Dev	0.738	0.154	2.020
Cpk or Cp	10.151	14.159	30.356
Post test Limit:	80-120	10	189

**Tested part number: 15 $\mu$ F +/-20% 25V, B Case Size**

	Cap ( $\mu$ F)	DF (%)	DCL ( $\mu$ A)
Minimum	13.153	1.590	0.008
Maximum	13.877	2.069	0.284
Mean	13.607	1.846	0.092
St. Dev	0.203	0.113	0.077
Cpk or Cp	7.199	18.152	485.965
Post test Limit:	12-18	8	112.5





# 4. Vibration, Mechanical Shock sequence

## 4-2. Vibration

### Test Results:

**Tested part number: 100 $\mu$ F +/-20% 6.3V, A Case Size**

	Cap ( $\mu$ F)	DF (%)	DCL ( $\mu$ A)
Minimum	96.453	3.332	2.055
Maximum	100.072	4.171	11.706
Mean	98.106	3.601	3.765
St. Dev	0.816	0.187	1.669
Cpk or Cp	8.939	11.376	36.988
Post test Limit:	80-120	10	189

**Tested part number: 15 $\mu$ F +/-20% 25V, B Case Size**

	Cap ( $\mu$ F)	DF (%)	DCL ( $\mu$ A)
Minimum	13.231	1.691	0.004
Maximum	13.996	2.174	0.261
Mean	13.679	1.973	0.068
St. Dev	0.210	0.108	0.072
Cpk or Cp	6.874	18.638	521.863
Post test Limit:	12-18	8	112.5