

INCH-POUND

MIL-C-11015/25C
14 May 2001
SUPERSEDING
MIL-C-11015/25B(USAF)
6 JULY 1976

MILITARY SPECIFICATION SHEET

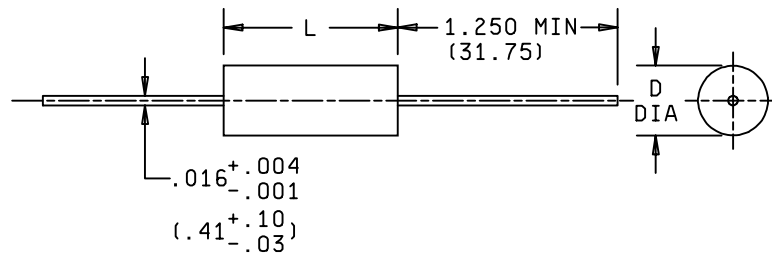
CAPACITORS, FIXED, CERAMIC DIELECTRIC (GENERAL PURPOSE),

STYLE CK31 AND CK32

The requirements for acquiring the capacitors described herein shall consist of this specification and MIL-C-11015.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

INACTIVE FOR NEW DESIGN AFTER 6 JULY 1977. STYLES CK31...TX and CK32...TX PARTS CANCELLED AFTER 14 MAY 2001. USE MIL-PRF-39014/21, STYLES CKR31 AND CKR32.



Dimensions								
Style	L				D			
	Inches		mm		Inches		mm	
	Min	Max	Min	Max	Min	Max	Min	Max
CK31	.230	.250	5.84	6.35	.080	.100	2.03	2.54
CK32	.230	.250	5.84	6.35	.120	.140	3.05	3.56

NOTES

1. All dimensions are in inches.
2. Millimeters are in parentheses.
3. Metric equivalents (to the nearest .01 mm) are given for general information only.

FIGURE 1. Styles CK31 and CK32 capacitors.

AMSC N/A

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DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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TABLE I. Styles CK31 and CK32 characteristics.

PIN <u>1</u> /	DC rated voltage	Operating temperature range and voltage temperature limits	Capacitance (pF)	Capacitance tolerance
CK31BT271-	50	BT	270	J, K
CK31BT331	50	BT	330	J, K
CK31BT391-	50	BT	390	J, K
CK31BT471-	50	BT	470	J, K
CK31BT561-	50	BT	560	J, K
CK31BT681-	50	BT	680	J, K
CK31BT821-	50	BT	820	J, K
CK31BT102-	50	BT	1,000	J, K
CK31BT122-	50	BT	1,200	J, K
CK31BT152-	50	BT	1,500	J, K
CK31BT182-	50	BT	1,800	J, K
CK31BT222-	50	BT	2,200	J, K
CK31BT272-	50	BT	2,700	J, K
CK31BT332-	50	BT	3,300	J, K
CK31BT392-	50	BT	3,900	J, K
CK31BT472-	50	BT	4,700	J, K
CK31BT562-	50	BT	5,600	J, K
CK31BT682-	50	BT	6,800	J, K
CK31BT882-	50	BT	8,200	J, K
CK31BT103-	50	BT	10,000	J, K
CK31BU123-	50	BU	12,000	K, M
CK31BU153-	50	BU	15,000	K, M
CK31BU183-	50	BU	18,000	K, M
CK31BU203-	50	BU	20,000	K, M
CK31BV233-	50	BV	22,000	K, M
CK31BV273-	50	BV	27,000	K, M
CK31BV333-	50	BV	33,000	K, M
CK31BV393-	50	BV	39,000	K, M
CK31BV473-	50	BV	47,000	K, M
CK31BV513-	50	BV	51,000	K, M
CK32BT123-	50	BT	12,000	J, K
CK32BT153-	50	BT	15,000	J, K
CK32BT183-	50	BT	18,000	J, K
CK32BT203-	50	BT	20,000	J, K
CK32BU223-	50	BU	22,000	K, M
CK32BU273-	50	BU	27,000	K, M
CK32BU333-	50	BU	33,000	K, M
CK32BU393	50	BU	39,000	K, M
CK32BV563-	50	BV	56,000	K, M
CK32BV623-	50	BV	62,000	K, M
CK32BV683-	50	BV	68,000	K, M
CK32BV753-	50	BV	75,000	K, M
CK32BV823--	50	BV	82,000	K, M
CK32BV913-	50	BV	91,000	K, M
CK32BV104-	50	BV	100,000	K, M

1/ Complete PIN will include an additional symbol to indicate capacitance tolerance.

REQUIREMENTS

Design and construction:

Dimensions and configuration - See figure 1.

Case type - Tubular with axial leads.

Capacitance value - See table I.

Capacitance tolerance - ± 5 percent (J), ± 10 percent (K), or ± 20 percent (M) as specified in table I.

Rated temperature - -55°C to $+125^{\circ}\text{C}$.

Dielectric withstanding voltage (DWV): In accordance with MIL-C-11015.

Dielectric:

Test voltage - 250 percent of dc working voltage.

Body insulation: Not applicable.

Barometric pressure (reduced): In accordance with MIL-C-11015 and method 105 of MIL-STD-202, 0.82 inch of mercury (80,000 feet).

Test potential - 150 percent of rated voltage.

Insulation resistance (IR): In accordance with MIL-C-11015, rated voltage applied.

100,000 megohms, minimum, or 1,000 megohm-microfarads, minimum, whichever is less.

Dissipation factor (DF): 1.0 percent max for voltage-temperature limit BT
1.5 percent max for voltage-temperature limit BU
3.0 percent max for voltage-temperature limit BV

TABLE II. Voltage-temperature limits

Voltage-temperature limits (%) capacitance change with reference to 25°C .		
Voltage-temperature symbol	Steps A to D, inclusive of table VIII (%)	Steps E to G, inclusive of table VIII (%)
T	+2, -10	+2, -10
U	+2, -15	+2, -15
V	+20, -45	+20, -50

Vibration, high frequency: In accordance with MIL-C-11015 and method 204 of MIL-STD-202, condition D (20 G's).

Thermal shock and immersion: In accordance with MIL-C-11015.

Immersion:

DWV - 250 percent of rated voltage.

IR - 10,000 megohms, minimum, or 100 megohm-microfarads, whichever is less.

Cap. - Change not more than 2 percent for voltage-temperature limits BT and BU, and 5 percent for voltage-temperature limit BV.

DF - Not greater than initial requirement.

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Salt spray (corrosion): Not applicable.

Terminal strength: In accordance with MIL-C-11015, 5 pounds applied.

Moisture resistance: In accordance with MIL-C-11015.

DWV - 250 percent of rated voltage

IR - 10,000 megohms, minimum, or 100 megohm-microfarads, whichever is less.

Cap. - Change not more than 2 percent for voltage-temperature limits BT and BU, and 5 percent for voltage-temperature limit BV.

DF - Not greater than initial requirement.

Solderability: In accordance with MIL-C-11015: 2 terminals.

Resistance to soldering heat: In accordance with MIL-C-11015.

IR - 100,000 megohms, minimum, or 1,000 megohm-microfarads, whichever is less.

Δ Cap. - ± 5 percent of initial measured value.

DF - Not greater than initial requirement.

Voltage-temperature limits - In accordance with MIL-C-11015 except capacitance change shall be as specified in table II herein.

Life (at elevated ambient temperature): In accordance with MIL-C-11015.

Test potential - 200 percent of rated voltage.

IR - At 25°C; not less than 10,000 megohms or 100 megohm-microfarads, whichever is less.

At 125°C, not less than 1,000 megohms or 10 megohm-microfarads, whichever is less.

Cap. - Change not greater than 2 percent for voltage-temperature limit BT, 5 percent for voltage-temperature limit BU, and 20 percent for voltage-temperature limit BV.

DF - Not greater than initial requirement.

Marking: In accordance with MIL-C-11015.

Changes from previous issue: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Air Force – 11
Navy – EC
DLA - CC

Preparing activity:
DLA - CC

(Project 5910-2069-12)