

SOLID TANTALUM CHIP CAPACITORS

T510 SERIES—High Capacitance-Low ESR

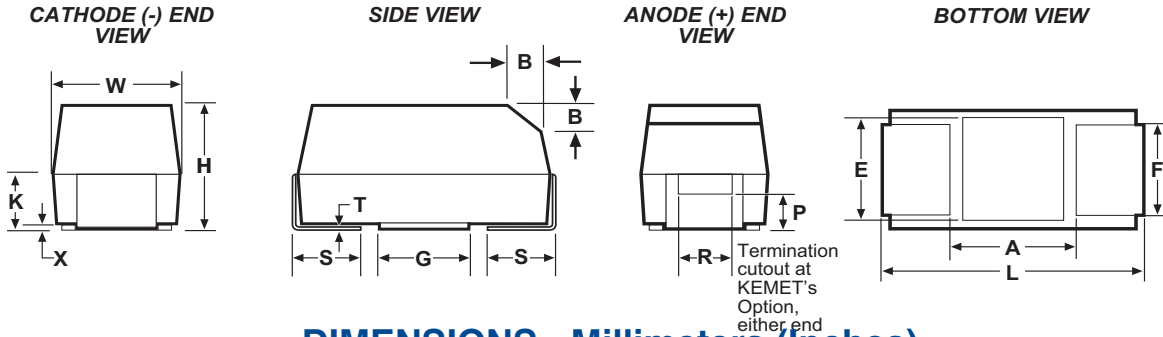


Solid Tantalum Surface Mount

FEATURES

- Ultra Low ESR < 30 mΩ
- New E/7260 Case with ESR < 18 mΩ
- Up to 5 Amps ripple current
- RoHS Compliant & Leadfree Termination (see www.kemet.com for lead transitions)
- Operating Temperature: -55°C to +125°C
- 100% accelerated steady-state aging
- 100% Surge current test
- Precision - molded, laser-marked case
- Symmetrical compliant terminations
- Taped and reeled per EIA 481-1

OUTLINE DRAWING



DIMENSIONS - Millimeters (Inches)

CASE SIZE		COMPONENT													
KEMET	EIA	L	W	H	K ±0.20 ±(.008)	F ±0.1 ±(.004)	S ±0.3 ±(.012)	B ±0.15 (Ref)±(.006)	X (Ref)	P (Ref)	R (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
X	7343-43	7.3 ± 0.3 (.287 ± .012)	4.3 ± 0.3 (.169 ± .012)	4.0 ± 0.3 (.157 ± .012)	2.3 (.091)	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 ± .004)	0.9 (.035)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)
E	7260-38	7.3 ± 0.3 (.287 ± .012)	6.0 ± 0.3 (.236 ± .012)	3.6 ± 0.2 (.142 ± .008)	2.3 (.091)	4.1 (.161)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 ± .004)	0.9 (.035)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)

Notes: Metric Dimensions govern
(Ref) - Dimensions provided for reference only.

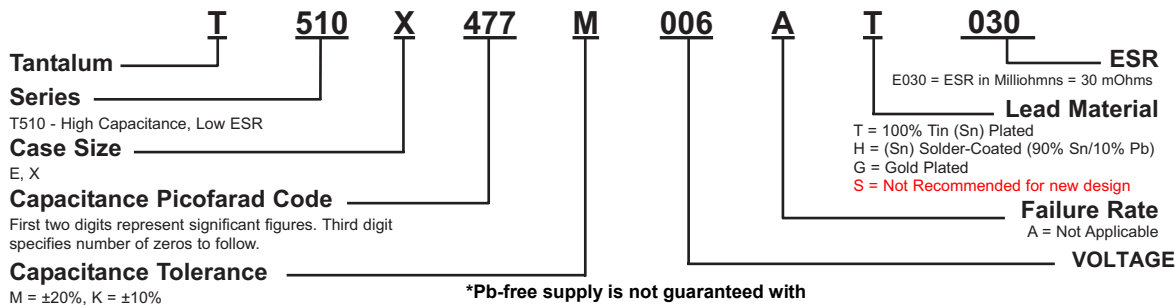
T510 RATINGS & PART NUMBER REFERENCE

Cap µF	Case Size	KEMET Part Number	DC Leakage µA @ +25°C Max	DF % @ +25°C 120Hz Max	ESR mΩ @ +25°C 100 kHz Max	Ripple Current Arms @ +25°C, 100 kHz, max		
						25°C	85°C	125°C
4 Volt Rating at +85°C (2.7 Volt Rating at 125°C)								
680.0	X	T510X687(1)004A(2)E030	27.2	6.0	30	3.0	2.7	1.2
1000.0	X	T510X108(1)004A(2)E018	40.0	6.0	18	3.9	3.5	1.5
1000.0	X	T510X108(1)004A(2)E023	40.0	6.0	23	3.4	3.0	1.3
1000.0	E	T510E108(1)004A(2)E018	40.0	6.0	18	4.0	3.6	1.6
1000.0	E	T510E108(1)004A(2)E010	40.0	6.0	10	5.3	4.8	2.1
6/6.3 Volt Rating at +85°C (4 Volt Rating at 125°C)								
470.0	X	T510X477(1)006A(2)E030	28.2	6.0	30	3.0	2.7	1.2
680.0	X	T510X687(1)006A(2)E023	42.8	6.0	23	3.4	3.1	1.4
680.0	E	T510E687(1)006A(2)E023	40.8	6.0	23	3.5	3.2	1.4
680.0	E	T510E687(1)006A(2)E012	40.8	6.0	12	4.8	4.3	1.9
10 Volt Rating at +85°C (7 Volt Rating at 125°C)								
330.0	X	T510X337(1)010A(2)E035	33.0	6.0	35	2.8	2.5	1.1
16 Volt Rating at +85°C (11 Volt Rating at 125°C)								
150.0	X	T510X157(1)016A(2)E030	24.0	6.0	30	3.0	2.7	1.2
150.0	X	T510X157(1)016A(2)E040	24.0	6.0	40	2.6	2.3	1.0
220.0	X	T510X227(1)016A(2)E040	35.2	10.0	40	2.6	2.3	1.0
220.0	X	T510X227(1)016A(2)E025	35.2	10.0	25	3.3	3.0	1.3

Cap µF	Case Size	KEMET Part Number	DC Leakage µA @ +25°C Max	DF % @ +25°C 120Hz Max	ESR mΩ @ +25°C 100 kHz Max	Ripple Current Arms @ +25°C, 100 kHz, max		
						25°C	85°C	125°C
20 Volt Rating at +85°C (13.4 Volt Rating at 125°C)								
100.0	X	T510X107(1)020A(2)E035	20.0	6.0	35.0	7.7	6.9	3.1
100.0	X	T510X107(1)020A(2)E040	20.0	6.0	40.0	2.6	2.3	1.0
100.0	X	T510X107(1)020A(2)E045	20.0	6.0	45.0	2.4	2.2	0.9
25 Volt Rating at +85°C (17 Volt Rating at 125°C)								
100.0	E	T510E107(1)025A(2)E050	25.0	8.0	50	2.4	2.1	1.0
35 Volt Rating at +85°C (23 Volt Rating at 125°C)								
22.0	X	T510X226(1)035A(2)E100	7.7	6.0	100	1.6	1.4	0.6
22.0	X	T510X226(1)035A(2)E080	7.7	6.0	80	1.8	1.7	0.7
22.0	X	T510X226(1)035A(2)E060	7.7	6.0	60	2.1	1.9	0.8
33.0	X	T510X336(1)035A(2)E065	11.6	6.0	65	2.0	1.8	0.8
33.0	X	T510X336(1)035A(2)E050	11.6	6.0	50	2.3	2.1	0.9
47.0	X	T510X476(1)035A(2)E055	16.5	8.0	55	2.2	2.0	0.9
47.0	X	T510X476(1)035A(2)E065	16.5	8.0	65	2.0	1.8	0.8
47.0	E	T510E476(1)035A(2)E050	16.5	8.0	50	2.4	2.1	1.0
50 Volt Rating at +85°C (33 Volt Rating at 125°C)								
10.0	X	T510X106(1)050A(2)E120	5.0	8.0	120	1.5	1.3	0.6
10.0	X	T510X106(1)050A(2)E090	5.0	8.0	90	1.7	1.6	0.7

(1) To complete KEMET part number insert "K" - ±10% or "M" - ±20% capacitance tolerance. (2) To complete KEMET part number, insert H (SnPb) or T - 100% tin.

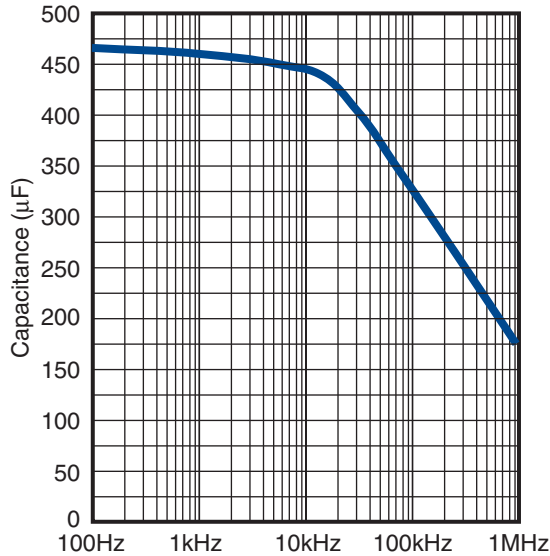
T510 ORDERING INFORMATION



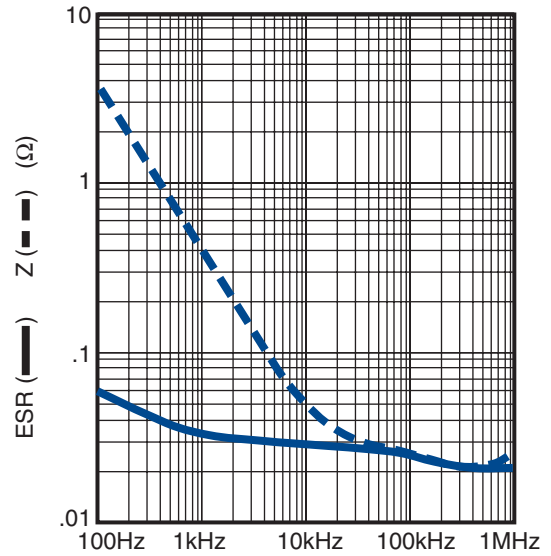
*Pb-free supply is not guaranteed with the 'S' termination code.

This termination code not available effective 15 July 2007.

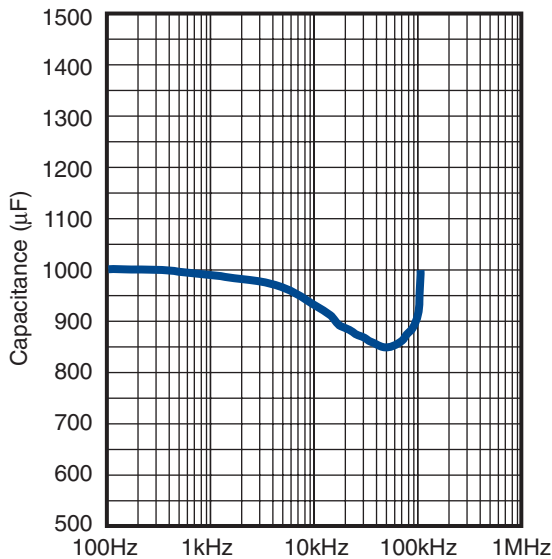
TYPICAL CAP FREQUENCY SCAN @ 25°C
T510X477M006AS



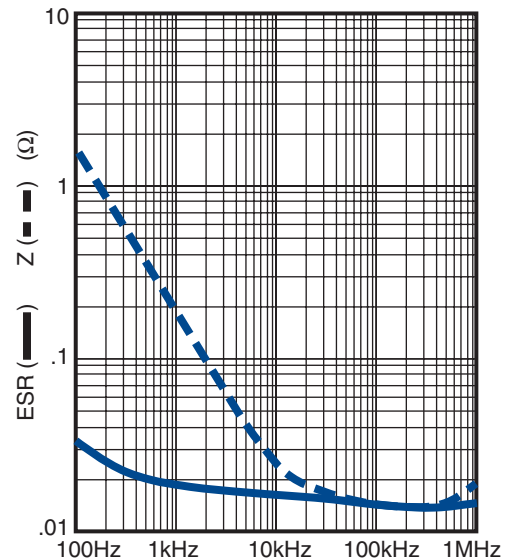
TYPICAL ESR/Z FREQUENCY SCAN @ 25°C
T510X477M006AS



TYPICAL CAP FREQUENCY SCAN @ 25°C
T510E108M004AS



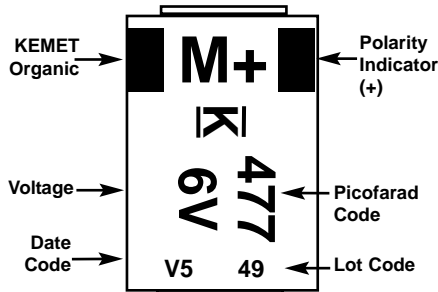
TYPICAL ESR/Z FREQUENCY SCAN @ 25°C
T510E108M004AS



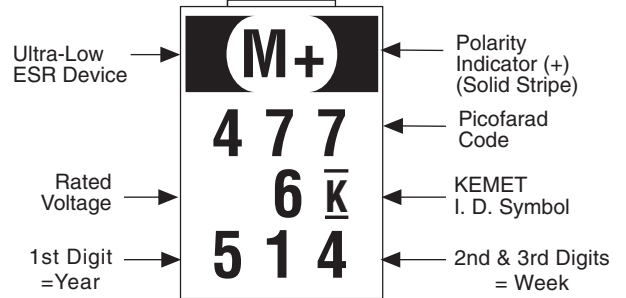
CAPACITOR ALTERNATE MARKINGS

Date Code Year	Date Code Month	
S = 2004	1 = Jan	7 = Jul
T = 2005	2 = Feb	8 = Aug
U = 2006	3 = Mar	9 = Sep
V = 2007	4 = Apr	10 = Oct
W = 2008	5 = May	11 = Nov
X = 2009	6 = Jun	12 = Dec

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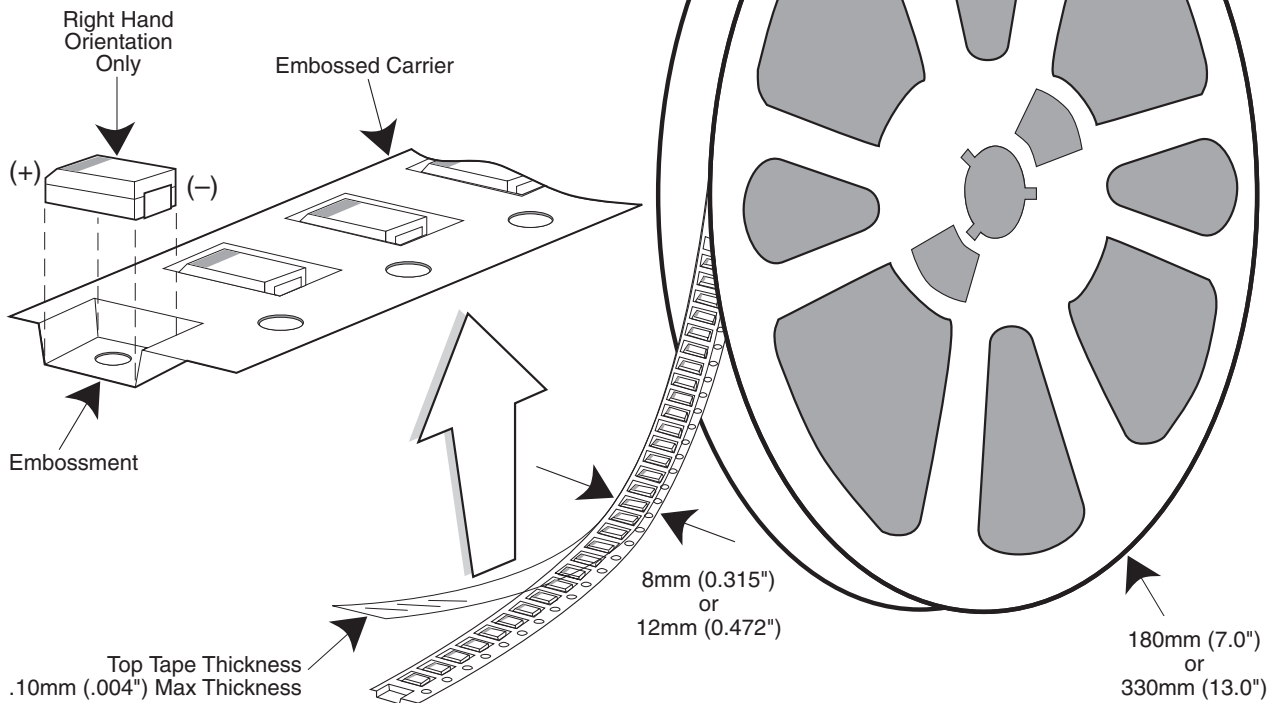
T510 CAPACITOR MARKINGS



"514" = The 14th week of 2005.

Tape & Reel Packaging

KEMET's Molded Tantalum and Aluminum Chip Capacitor families are packaged in 8 mm and 12 mm plastic tape on 7" and 13" reels, in accordance with EIA Standard 481-1: Taping of Surface Mount Components for Automatic Handling. This packaging system is compatible with all tape fed automatic pick and place systems.



Labeling: Bar code labeling (standard or custom) shall be on the side of the reel opposite the sprocket holes. Refer to EIA-556.

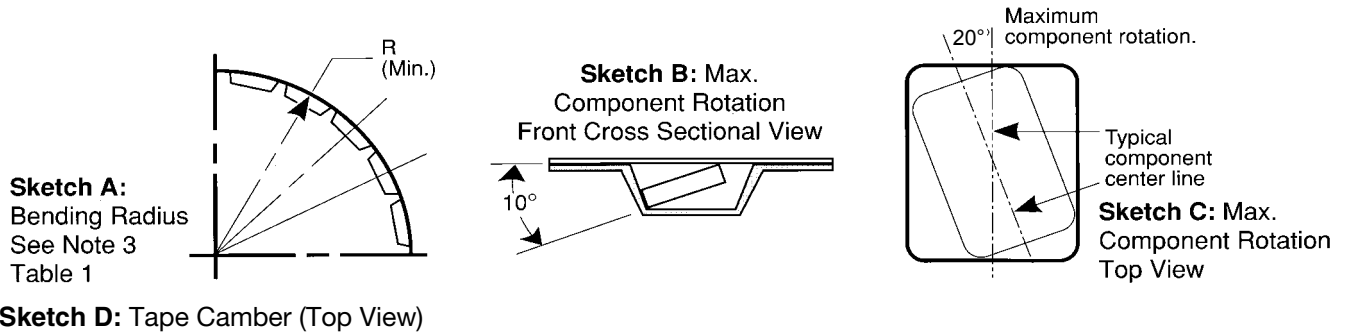
QUANTITIES PACKAGED PER REEL

Case Code		Tape Width-mm	7" Reel*	13" Reel*
KEMET	EIA			
R	2012-12	8	2,500	10,000
S	3216-12	8	2,500	10,000
T	3528-12	8	2,500	10,000
U	6032-15	12	1,000	5,000
W	7343-15	12	1,000	3,000
V	7343-20	12	1,000	3,000
A	3216-18	8	2,000	9,000
B	3528-21	8	2,000	8,000
C	6032-28	12	500	3,000
D	7343-31	12	500	2,500
Y	7343-40	12	500	2,000
X	7343-43	12	500	2,000
E	7260-38	12	500	2,000

* No c-spec required for 7" reel packaging. C-7280 required for 13" reel packaging.

Packaging Information

Embossed Carrier Tape Configuration (cont.)



Sketch D: Tape Camber (Top View)

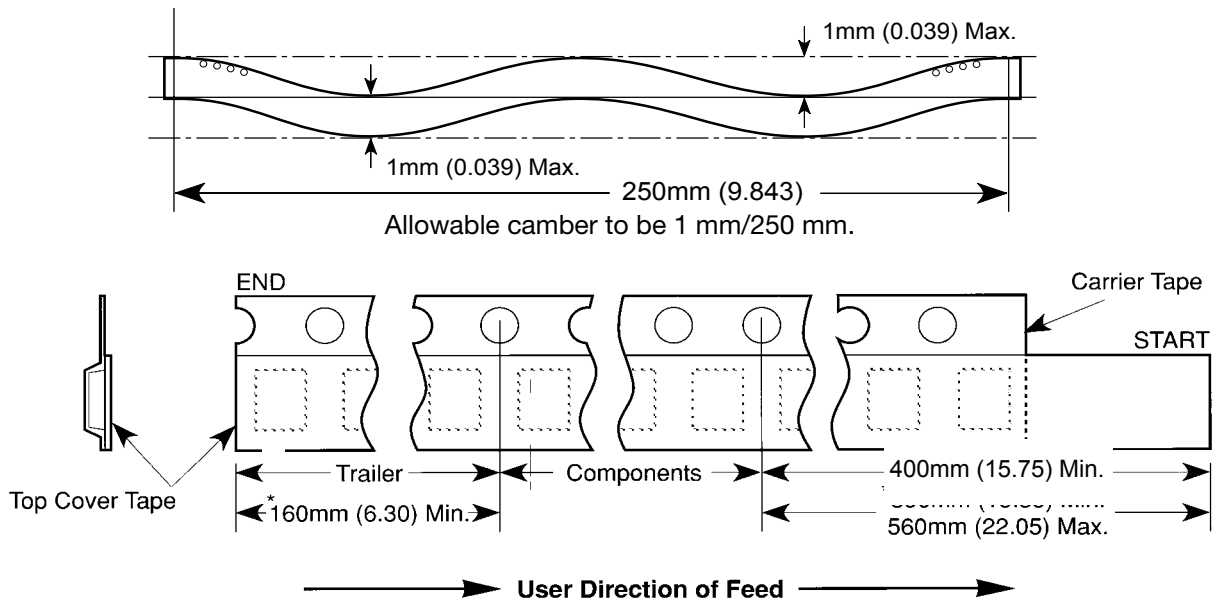


Figure 2:
Tape Leader & Trailer
Dimensions
(Metric
Dimensions
Will Govern)

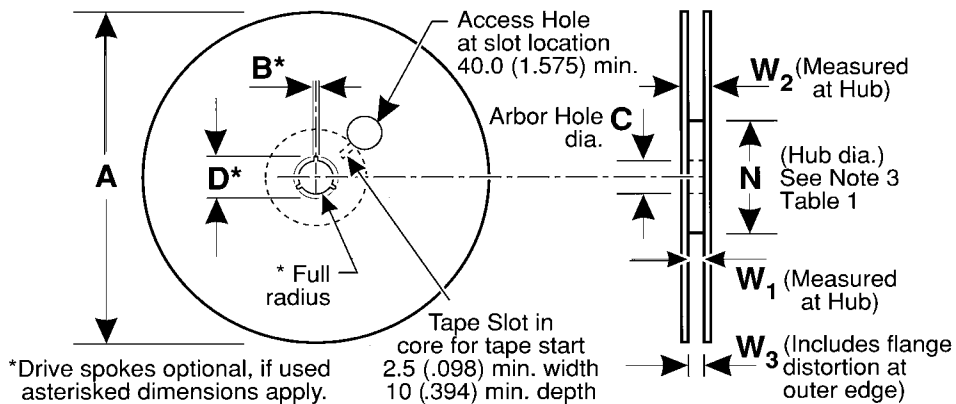


Figure 3: Reel Dimensions (Metric Dimensions will govern)

Table 2 – REEL DIMENSIONS (Metric will govern)

Tape Size	A Max	B^* Min	C	D^* Min	N Min	W_1	W_2 Max	W_3
8 mm	330.0 (12.992)	1.5 (0.059)	13.0 ± 0.20 (0.512 ± 0.008)	20.2 (0.795)	50.0 (1.969) See Note 3	8.4 +1.5, -0.0 (0.331 +0.059, -0.0)	14.4 (0.567)	7.9 Min (0.311) 10.9 Max (0.429)
12 mm	330.0 (12.992)	1.5 (0.059)	13.0 ± 0.20 (0.512 ± 0.008)	20.2 (0.795)	Table 1	12.4 +2.0, -0.0 (0.488 +0.078, -0.0)	18.4 (0.724)	11.9 Min (0.469) 15.4 Max (0.606)