

# TAD THICK FILM CHIP RESISTORS $\pm 5\%$ (J)

## DIMENSIONAL CONFIGURATION:

inches (mm) :

ISO 9002  
REGISTERED

TAD Part # (size)	A	B	C	D	E	EIA Ref. #	
CR05 (0402)	0.045 $\pm$ 0.004 (1.0 $\pm$ 0.1-0.05)	0.025 $\pm$ 0.002 (0.50 $\pm$ 0.05)	0.014 $\pm$ 0.002 (0.35 $\pm$ 0.05)	0.008 $\pm$ 0.004 (0.2 $\pm$ 0.1)	0.01+0.002-0.004 (0.25+0.05-0.1)	1005	
CR16 (0603)	0.063 $\pm$ 0.004 (1.60 $\pm$ 0.10)	0.031 $\pm$ 0.004 (0.8 $\pm$ 0.1)	0.020 $\pm$ 0.004 (0.5 $\pm$ 0.1)	0.008 $\pm$ 0.004 (0.2 $\pm$ 0.1)	0.012+0.008-0.004 (0.3+0.2-0.1)	1608	
CR10 (0805)	0.079 $\pm$ 0.006 (2.00 $\pm$ 0.15)	0.049 $\pm$ 0.006 (1.25 $\pm$ 0.15)	0.020 $\pm$ 0.006 (0.50 $\pm$ 0.15)	0.016 $\pm$ 0.008 (0.40 $\pm$ 0.25)	0.012+0.008-0.004 (0.3+0.2-0.1)	2012	
CR18 (1206)	0.126 $\pm$ 0.006 (3.20 $\pm$ 0.15)	0.063 $\pm$ 0.006 (1.60 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.018 $\pm$ 0.010 (0.45 $\pm$ 0.25)	0.016+0.008-0.004 (0.4+0.2-0.1)	3216	
CR14 (1210)	0.126 $\pm$ 0.008 (3.2 $\pm$ 0.2)	0.102 $\pm$ 0.008 (2.6 $\pm$ 0.2)	0.024 $\pm$ 0.004 (0.6 $\pm$ 0.1)	0.020 $\pm$ 0.012 (0.5 $\pm$ 0.3)	0.016+0.008-0.004 (0.4+0.2-0.1)	3225	
CR12 (2010)	0.197 $\pm$ 0.008 (5.0 $\pm$ 0.2)	0.098 $\pm$ 0.008 (2.50 $\pm$ 0.20)	0.024 $\pm$ 0.004 (0.6 $\pm$ 0.1)	0.020 $\pm$ 0.012 (0.5 $\pm$ 0.3)	0.016+0.008-0.004 (0.4+0.2-0.1)	5025	
CR01 (2512)	0.248 $\pm$ 0.008 (6.3 $\pm$ 0.2)	0.122 $\pm$ 0.008 (3.1 $\pm$ 0.2)	0.024 $\pm$ 0.004 (0.60 $\pm$ 0.15)	0.020 $\pm$ 0.012 (0.5 $\pm$ 0.3)	0.016+0.008-0.004 (0.4+0.2-0.1)	6332	

**STANDARD APPLICATIONS:** \* Contact TAD Engineering for specific or extended technical data.

TAD P.N. (size)	PWR. RATING @ 70 deg. C	TCR (ppm / deg. C)	RESISTANCE RANGE (E 24 values)	RESISTANCE TOLERANCE	WORKING VOLTAGE	OVERLOAD VOLTAGE	OPERATING TEMP. RANGE
CR05 (0402)	63 mW (1/16 W)	$\pm 250$	10 $\Omega$ ~ 3.3 M $\Omega$	$\pm 5\%$	50 V	100 V	-55 ~ +125 deg. C
CR16 (0603)	63 mW (1/16 W)	$\pm 200$	10 $\Omega$ ~ 3.3 M $\Omega$		50 V	100 V	-55 ~ +150 deg. C
	100 mW (1/10 W)				150 V	300 V	
CR10 (0805)	100 mW (1/10 W)		1 $\Omega$ ~ 10 M $\Omega$				
	125 mW (1/8 W)		1 $\Omega$ ~ 10 M $\Omega$		200 V	400 V	
CR18 (1206)	125 mW (1/8 W)		1 $\Omega$ ~ 10 M $\Omega$				
	250 mW (1/4 W)		1 $\Omega$ ~ 10 M $\Omega$				
CR14 (1210)	250 mW (1/4 W)		1 $\Omega$ ~ 10 M $\Omega$				
CR12 (2010)	500 mW (1/2 W)		1 $\Omega$ ~ 10 M $\Omega$				
CR01 (2512)	1 W	1 $\Omega$ ~ 10 M $\Omega$					

**TAD**

570 W. LAMBERT ROAD, SUITE M, BREA, CA 92621

# TAD THICK FILM $\pm 5\%$ ( J )

CHARACTERISTICS		
ITEM	MAX. DELTA $\Omega + 0.05 \Omega$	TEST CONDITIONS
SHORT TIME OVERLOAD	$\pm 0.5 \%$	EIA STD. 575, Para. 3.6 2.5 X Rated Voltage for 5 sec.
LOAD LIFE	$\pm 1.5 \%$	EIA STD.575, Para. 3.14 90 min. on; 30 min. off for 1000 hrs.
TEMPERATURE CYCLING	$\pm 1.0 \%$	EIA STD. 575, Para. 3.5 -55 ~ +125 deg. C; 5 cycles.
RESISTANCE TO SOLDER HEAT	$\pm 0.3 \%$	MIL-R-55342D, Para. 4.7.7, 10 sec. @ +260 deg. C.
TERMINAL STRENGTH	$\pm 0.5 \%$	EIA STD. 575, Para. 3.9, 20 gms. @ 90 deg. angle for 30 sec.
MOISTURE LOAD LIFE	$\pm 1.5 \%$	EIA STD. 575, Para. 3.10, 10 cycles ( 240 hrs. ).
SOLDERABILITY	95 % min. coverage	EIA STD. 575, Para. 3.12 3 sec. of immersion @ + 215 deg. C.

## ZERO JUMPERS :

TYPE ( size )	RATED CURRENT	RESISTANCE	OVERLOAD
CJ06-0R0JM (0603)	1 AMP	LESS THAN 50m ohm	10 A 1 sec.
CJ10-0R0JM (0805)	1 AMP	LESS THAN 50m ohm	10 A 1 sec.
CJ18-0R0JM (1206)	2 AMP	LESS THAN 50m ohm	10 A 1 sec.

## ORDERING :

CR	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODEL	SIZE CODE	RESISTANCE VALUE CODE	TOLERANCE	PACKAGING
	<div style="border: 1px solid black; padding: 5px;">           05=0402            14=1210 16=0603            12=2010 10=0805            01=2512 18=1206         </div>	<div style="border: 1px solid black; padding: 5px;">           First two digits are significant; the last digit a multiplier.         </div>	<div style="border: 1px solid black; padding: 5px;">           J = 5%         </div>	<div style="border: 1px solid black; padding: 5px;">           M :            Paper Tape,            Plastic Reel         </div>



# TAD THICK FILM CHIP RESISTORS $\pm 1\%$ ( F )

## DIMENSIONAL CONFIGURATION :

inches (mm) :

TAD Part # (size)	A	B	C	D	E	EIA Ref. #	
CR05 (0402)	0.045 $\pm$ 0.004 (1.0 $\pm$ 0.1-0.05)	0.025 $\pm$ 0.002 (0.50 $\pm$ 0.05)	0.014 $\pm$ 0.002 (0.35 $\pm$ 0.05)	0.008 $\pm$ 0.004 (0.2 $\pm$ 0.1)	0.01+0.002-0.004 (0.25+0.05-0.1)	1005	
CR16 (0603)	0.063 $\pm$ 0.004 (1.60 $\pm$ 0.10)	0.031 $\pm$ 0.004 (0.8 $\pm$ 0.1)	0.020 $\pm$ 0.004 (0.5 $\pm$ 0.1)	0.008 $\pm$ 0.004 (0.2 $\pm$ 0.1)	0.012+0.008-0.004 (0.3+0.2-0.1)	1608	
CR10 (0805)	0.079 $\pm$ 0.006 (2.00 $\pm$ 0.15)	0.049 $\pm$ 0.006 (1.25 $\pm$ 0.15)	0.020 $\pm$ 0.006 (0.50 $\pm$ 0.15)	0.016 $\pm$ 0.008 (0.40 $\pm$ 0.25)	0.012+0.008-0.004 (0.3+0.2-0.1)	2012	
CR18 (1206)	0.126 $\pm$ 0.006 (3.20 $\pm$ 0.15)	0.063 $\pm$ 0.006 (1.60 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.018 $\pm$ 0.010 (0.45 $\pm$ 0.25)	0.016+0.008-0.004 (0.4+0.2-0.1)	3216	
CR14 (1210)	0.126 $\pm$ 0.008 (3.2 $\pm$ 0.2)	0.102 $\pm$ 0.008 (2.6 $\pm$ 0.2)	0.024 $\pm$ 0.004 (0.6 $\pm$ 0.1)	0.020 $\pm$ 0.012 (0.5 $\pm$ 0.3)	0.016+0.008-0.004 (0.4+0.2-0.1)	3225	
CR12 (2010)	0.197 $\pm$ 0.008 (5.0 $\pm$ 0.2)	0.098 $\pm$ 0.008 (2.50 $\pm$ 0.20)	0.024 $\pm$ 0.004 (0.6 $\pm$ 0.1)	0.020 $\pm$ 0.012 (0.5 $\pm$ 0.3)	0.016+0.008-0.004 (0.4+0.2-0.1)	5025	

**STANDARD APPLICATIONS :** \* Contact TAD Engineering for specific or extended technical data.

TAD P.N. (size)	PWR. RATING @ 70 deg. C	TCR (ppm / deg. C)	RESISTANCE RANGE (E 96 values)	RESISTANCE TOLERANCE	WORKING VOLTAGE	OVERLOAD VOLTAGE	OPERATING TEMP. RANGE
CR05 (0402)	63 mW (1/16 W)	$\pm 250$	100 $\Omega$ ~ 1 M $\Omega$	$\pm 1\%$	50 V	100 V	-55 ~ +125 deg. C
CR16 (0603)	63 mW (1/16 W)	$\pm 100$	100 $\Omega$ ~ 1 M $\Omega$		50 V	100 V	
	100 mW (1/10 W)				150 V	300 V	
CR10 (0805)	100 mW (1/10 W)		10 $\Omega$ ~ 1 M $\Omega$				
	125 mW (1/8 W)		10 $\Omega$ ~ 1 M $\Omega$		200 V	400 V	
CR18 (1206)	125 mW (1/8 W)		10 $\Omega$ ~ 1 M $\Omega$				
	250 mW (1/4 W)		10 $\Omega$ ~ 1 M $\Omega$				
CR14 (1210)	250 mW (1/4 W)						
CR12 (2010)	500 mW (1/2 W)		10 $\Omega$ ~ 1 M $\Omega$				

## ORDERING :

CR	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODEL	SIZE CODE	RESISTANCE VALUE CODE	TOLERANCE	PACKAGING
	05=0402 18=1206 16=0603 14=1210 10=0805 12=2010	First three digits are significant; the last digit a multiplier.	F = $\pm 1\%$	M: Paper Tape, Plastic Reel

# TAD THICK FILM CHIP RESISTORS $\pm 1\%$ ( F )

CHARACTERISTICS		
ITEM	MAX. DELTA $\Omega + 0.05 \Omega$	TEST CONDITIONS
SHORT TIME OVERLOAD	$\pm 0.25 \%$	EIA STD. 575, Para. 3.6, 2.5 X Rated Voltage for 5 sec.
LOAD LIFE	$\pm 1.0 \%$	EIA STD. 575, Para. 3.14, 90 min. on; 30 min. off for 1000 hrs.
TEMPERATURE CYCLING	$\pm 0.75 \%$	EIA STD. 575, Para. 3.5, -55 ~ +125 deg. C; 5 cycles.
RESISTANCE TO SOLDER HEAT	$\pm 0.2 \%$	MIL-R-55342D, Para. 4.7.7, 10 sec. @ +260 deg. C.
TERMINAL STRENGTH	$\pm 0.5 \%$	EIA STD. 575, Para. 3.9, 20 gms. @ 90 deg. angle for 30 sec.
MOISTURE LOAD LIFE	$\pm 0.5 \%$	EIA STD. 575, Para. 3.10, 10 cycles ( 240 hrs. ).
SOLDERABILITY	95 % min. coverage	EIA STD. 575, Para. 3.12, 3 sec. of immersion @ + 215 deg. C.

## ZERO JUMPERS :

TYPE (size)	RATED CURRENT	Max. SURGE CURRENT	RESISTANCE	OPERATING TEMP. RANGE	RATED AMBIENT TEMP.
CJ16- (0603)	1 AMP	5 AMP	LESS THAN 20m ohm	-55~ +125 deg. C	+70 deg. C
CJ21- (0805)	1 AMP	5 AMP			
CJ32- (1206)	2 AMP	10 AMP			

## LOW IMPEDANCE , LOW RESISTANCE ZERO CHIP JUMPER FEATURES :

Thanks to the cooperation of an equipment manufacturer, TAD Components has developed a chip jumper that accepts a complete, top side cover of flow solder. In comparison with the standard chip jumper, this process allows a jumper to be placed in a circuit with very little resistance change.

Dimension characteristics of this new chip jumper are the same as the conventional standard, eliminating any special mounting fixtures.

The application of this chip jumper is ideal for an in-circuit test point.

Audio circuits, Ground circuits and other applications that require low resistance or low impedance, respond very well to the TAD CJ, Surface Mount Chip Jumper.



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