Cermet Trimmers, Surface Mount, 4.0 mm Square, Single Turn, Industrial Grade

FEATURES

- 0.25 W at 70 °C
- Compatible with popular vacuum pick-and-place equipment
- J-hook and gull-wing configurations
- Construction: fully sealed (to withstand board washing)
- Industrial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

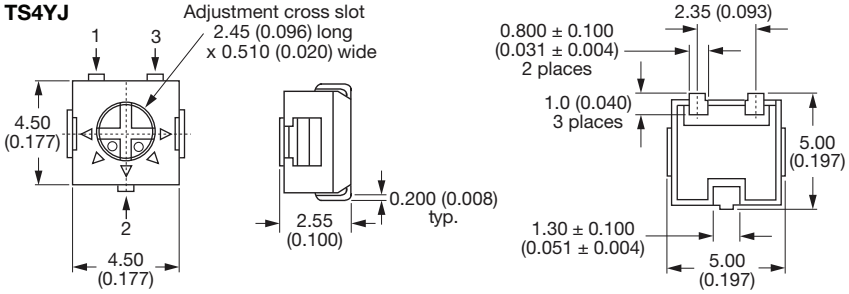
RoHS COMPLIANT

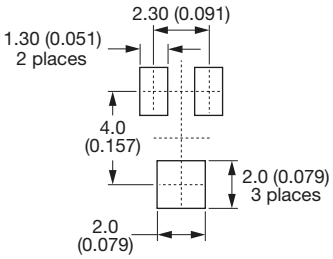
LINKS TO ADDITIONAL RESOURCES

3D Models

DIMENSIONS in millimeters (inches) ± 0.25 mm (± 0.010")

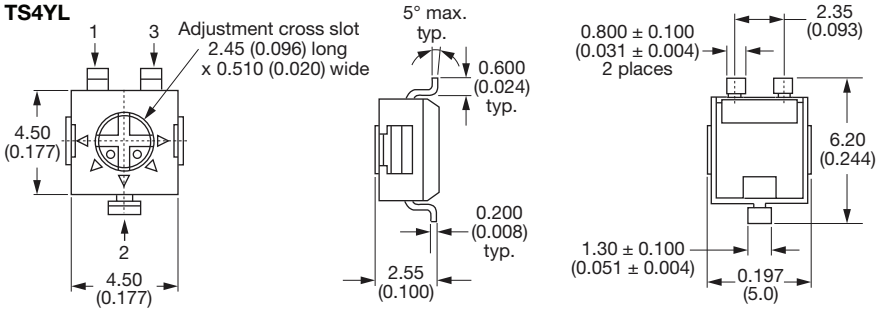
TS4YJ

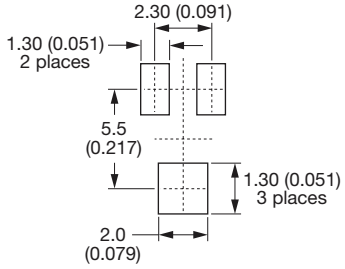




Recommended PCB footprint

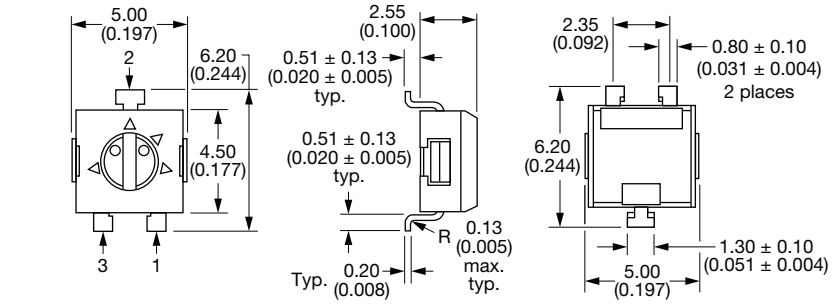
TS4YL

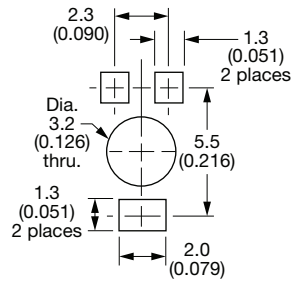




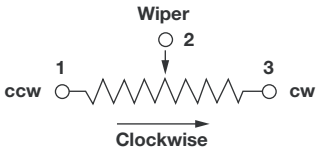
Recommended PCB footprint

TS4RL





Recommended PCB footprint

ELECTRICAL SPECIFICATIONS	
Resistance range	10 Ω to 2 MΩ (see Standard Resistance table)
Tolerance	± 20 % standard
End resistance	1 % or 2 Ω maximum, whichever is greater
Temperature coefficient	± 100 ppm/°C
Power rating	0.25 W at +70 °C (300 V maximum), 0 W at +125 °C
Circuit diagram	
Contact resistance variation (CRV)	1 % or 3 Ω
Resolution	Infinite
Insulation resistance (500 V_{DC})	100 MΩ minimum
Dielectric strength (RMS)	Sea level 500 V_{AC} (1 minute)
Adjustment angle	210° nominal

MECHANICAL SPECIFICATIONS	
Mechanical angle	240° nominal
Operating torque (typical)	1.8 Ncm
End stop torque (typical)	3.0 Ncm
Weight	Approximately 0.01 oz.
Wiper	Positioned at approx. 50 %

ENVIRONMENTAL SPECIFICATIONS	
Temperature range	-55 °C to +125 °C
MSL level	1

PERFORMANCES

TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS		
		$\Delta R_T/R_T$ (%)	$\Delta V_{1\text{-}2}/V_{1\text{-}3}$ (%)	OTHER
Vibration	20 *g*'s	± 1 %	± 1 %	-
Shock	100 *g*'s	± 1 %	± 1 %	-
Electrical endurance	At 70 °C rated power 1000 h	± 3 %	-	-
Mechanical endurance	100 cycles	± 3 %	-	-
Change of temperature	5 cycles	± 2 %	± 1 %	-
Humidity	90 % to 98 % relative humidity 10 cycles, 240 h	± 2 %	-	Insulation resistance: 10 MΩ

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability

SOLDERING RECOMMENDATIONS
Recommended reflow profile 2, see application note www.vishay.com/doc?52029

TWO DIGIT DATE CODE

YEAR					
1990	A	2000	M	2010	A
1991	B	2001	N	2011	B
1992	C	2002	P	2012	C
1993	D	2003	R	2013	D
1994	E	2004	S	2014	E
1995	F	2005	T	2015	F
1996	H	2006	U	2016	H
1997	J	2007	V	2017	J
1998	K	2008	W	2018	K
1999	L	2009	X	2019	L

MONTH			
January	1	July	7
February	2	August	8
March	3	September	9
April	4	October	O
May	5	November	N
June	6	December	D

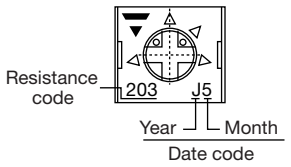
STANDARD RESISTANCE ELEMENT DATA

RESISTANCE Ω	RESISTANCE CODE	TYPICAL TCR (ppm/°C)
10	100	± 100
20	200	
50	500	
100	101	
200	201	
500	501	
1K	102	
2K	202	
4.7K	472	
5K	502	
10K	103	
20K	203	
22K	223	
50K	503	
100K	104	
200K	204	
250K	254	
500K	504	
1M	105	
2M	205	

Note

- Special resistance available

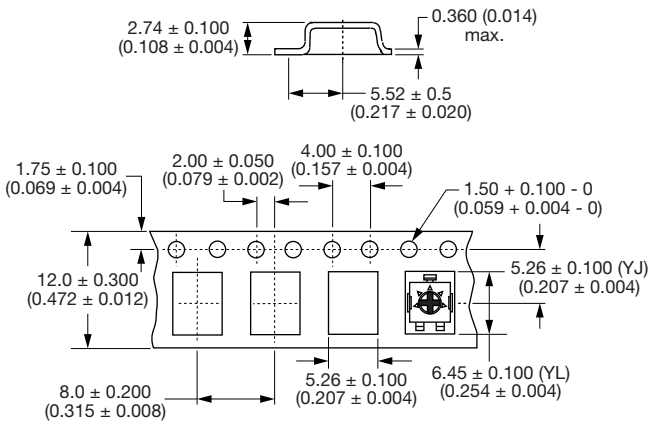
PART MARKING



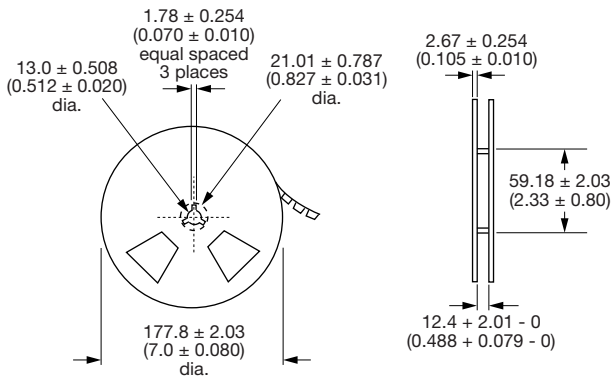
- Manufacturers code
- Resistance code
- Date code

PACKAGING in millimeters (inches)

TS4YJ, TS4YL
Tape



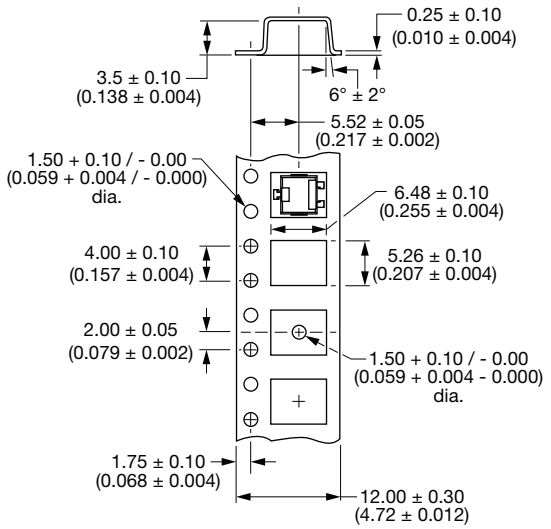
TS4YJ, TS4YL
Reel



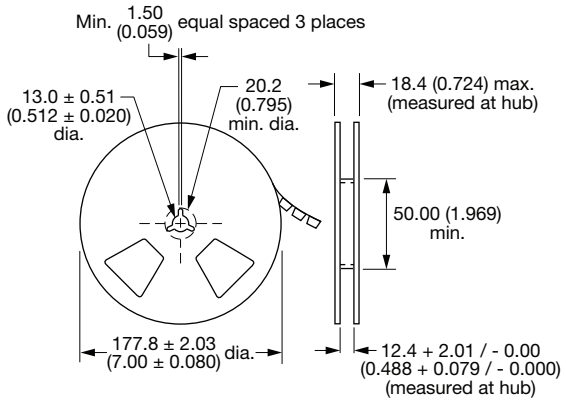
500 pieces per 7" reel standard. Meets EIA Specifications 481.

PACKAGING in millimeters (inches)

TS4RL
Tape



TS4RL
Reel



ORDERING INFORMATION (part number)

T	S	4	Y	L	5	0	2	M	R	1	0				

MODEL	STYLE	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL NUMBER
TS4	**YJ** **YL** **RL**	From 10 Ω to 2 MΩ 502 = 5 kΩ	**M** = ± 20 %	**R10** = reel 500 pieces	(If applicable) Given by Vishay for custom design

DESCRIPTION (for information only)

TS4	YL	5K	20 %		TR	e3
MODEL	STYLE	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD FINISH

RELATED DOCUMENTS

APPLICATION NOTES	
Potentiometers and Trimmers	www.vishay.com/doc?51001
Guidelines for Vishay Sfernice Resistive and Inductive Components	www.vishay.com/doc?52029
Selector Guide	www.vishay.com/doc?49286

ACCESSORIES

Screwdrivers (to order separately)	www.vishay.com/doc?57015

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