

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


**FEATURES**

- 0.25 W at 70 °C
- Fully sealed to withstand board washing
- Compatible with popular vacuum pick-and-place equipment
- J-hook and gull-wing configurations
- Compliant to RoHS Directive 2002/95/EC


**RoHS**  
COMPLIANT

DIMENSIONS in millimeters (inches) ± 0.25 mm (± 0.010")		
<b>TS4YJ</b> 		<p>Recommended PCB footprint</p>
<b>TS4YL</b> 		<p>Recommended PCB footprint</p>

ELECTRICAL SPECIFICATIONS	
<b>Resistive Range</b>	10 Ω to 2 MΩ (see Standard Resistance table)
<b>Tolerance</b>	± 20 % standard
<b>End Resistance</b>	1 % or 2 Ω maximum, whichever is greater
<b>Temperature Coefficient</b>	± 100 ppm/°C
<b>Power Rating</b>	(300 V maximum) 0.25 W at + 70 °C, 0 W at + 125 °C
<b>Circuit Diagram</b>	
<b>Contact Resistance Variation (CRV)</b>	1 % or 3 Ω
<b>Resolution</b>	Infinite
<b>Insulation Resistance (500 V<sub>DC</sub>)</b>	100 MΩ minimum
<b>Dielectric Strength (RMS)</b>	Sea level 500 V <sub>AC</sub> (1 minute)
<b>Adjustment Angle</b>	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

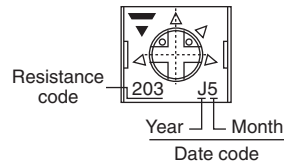
PERFORMANCES				
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS		
		$\Delta R_T/R_T$ (%)	$\Delta V_{1-2}/V_{1-3}$ (%)	OTHER
Vibration	20 g's	± 1 %	± 1 %	-
Shock	100 g's	± 1 %	± 1 %	-
Electrical Endurance	At 70 °C rated power 1000 h	± 3 %	-	-
Mechanical Endurance	100 cycles	± 3 %	-	-
Change of Temperature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

SOLDERING RECOMMENDATIONS
Recommended reflow profile 2, see Application Note <a href="http://www.vishay.com/doc?52029">www.vishay.com/doc?52029</a>

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		

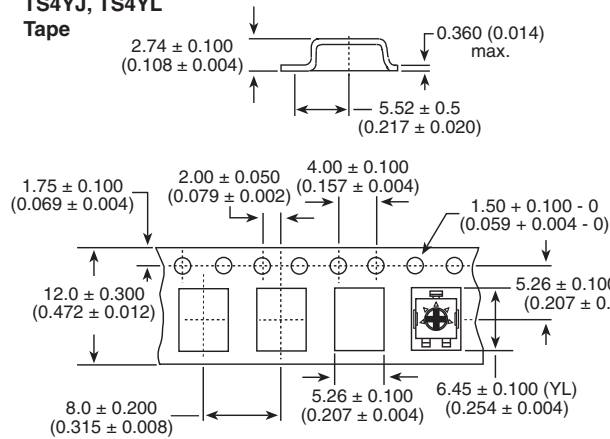
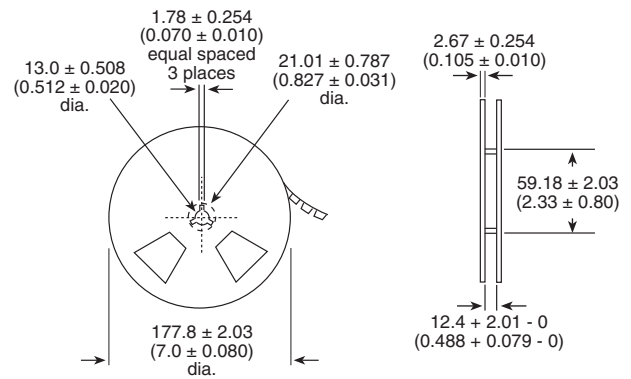
STANDARD RESISTANCE ELEMENT DATA	
RESISTANCE Ω	RESISTANCE CODE
10	100
20	200
50	500
100	101
200	201
500	501
1K	102
2K	202
5K	502
10K	103
20K	203
50K	503
100K	104
200K	204
500K	504
1M	105
2M	205

**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.

**ORDERING INFORMATION** (Part Number)

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

**TS4**

STYLE

**YJ**  
**YL**

OHMIC VALUE

 From 10 Ω to 2 MΩ  
**502 = 5 kΩ**

TOLERANCE

**M = ± 20 %**

PACKAGING

**R10 =**  
 Reel 500 pieces

 SPECIAL  
 NUMBER

 (If applicable)  
 Given by  
 Vishay  
 for custom  
 design

**DESCRIPTION** (for information only)

**TS4**

MODEL

**YL**

STYLE

**5K**

VALUE

**20 %**

TOLERANCE

**TR**

PACKAGING

**e3**

LEAD FINISH



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- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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