

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") | | |
|---------------------------------------------------------|--|----------------------------------|
| TS4YJ | | <p>Recommended PCB footprint</p> |
| TS4YL | | <p>Recommended PCB footprint</p> |

| ELECTRICAL SPECIFICATIONS | |
|---------------------------------------------------|----------------------------------------------------|
| Resistive 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 | (300 V maximum) 0.25 W at + 70 °C, 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 | | |
| | | $\Delta R_T/R_T$ (%) | $\Delta V_{1-2}/V_{1-3}$ (%) | 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 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 |
| 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)

DESCRIPTION (for information only)

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



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