

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Transistor Diode
SOT523

SOT523

SPECIFICATION

| | | | |
|-----------------------------|------------|---------|--|
| 671 | DTA114TExx | ST53 | E03 |
| Type | Type | Package | Packing |
| 671: Transistor Diode | DTA114TE | SOT523 | E03: Embossed tape and reel for 3k pc (7'REEL) |

All products according to RoHS (2015/863/EU)

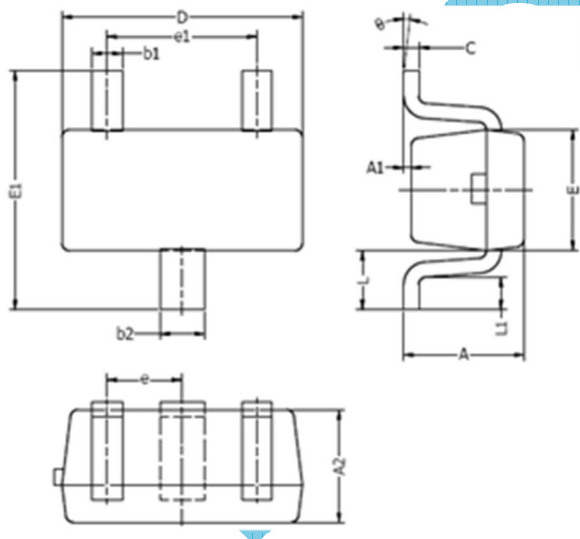
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SOT523

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Transistor Diode

DTA114TE

PACKAGE OUTLINE



| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.70 | 0.90 | 0.028 | 0.035 |
| A1 | 0.00 | 0.10 | 0.000 | 0.004 |
| A2 | 0.70 | 0.80 | 0.028 | 0.031 |
| b1 | 0.15 | 0.25 | 0.006 | 0.010 |
| b2 | 0.25 | 0.35 | 0.010 | 0.014 |
| c | 0.10 | 0.20 | 0.004 | 0.008 |
| D | 1.50 | 1.70 | 0.059 | 0.067 |
| E | 0.70 | 0.90 | 0.028 | 0.035 |
| E1 | 1.45 | 1.75 | 0.057 | 0.069 |
| e | 0.50 TYP. | | 0.020 TYP. | |
| e1 | 0.90 | 1.10 | 0.035 | 0.043 |
| L | 0.40 REF. | | 0.016 REF. | |
| L1 | 0.10 | 0.30 | 0.004 | 0.012 |
| θ | 0° | 8° | 0° | 8° |

2/3/2022

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Absolute Maximum Ratings TA = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|------------------|--|-------------|-------|
| V _{CB0} | Collector-Base Voltage | -50 | V |
| V _{CEO} | Collector-Emitter Voltage | -50 | V |
| V _{EBO} | Emitter-Base Voltage | -5 | V |
| I _C | Collector Current - Continuous | -100 | mA |
| P _D | Power Dissipation (FR-4 Board-minimum pad 25°C) | 150 | mW |
| T _J | Junction to Ambient | 150 | °C |
| T _{STG} | Storage Temperature Range | -55 to +150 | °C |

These ratings are limiting values above which the serviceability of the device may be impaired

Electrical Characteristics (TA = 25°C unless otherwise noted)

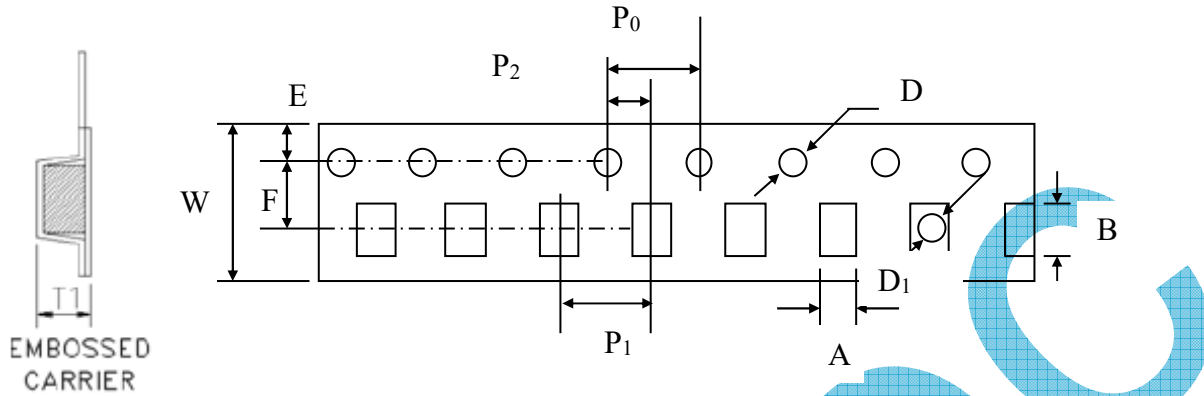
| Parameter | Symbol | Test Condition | Limits | | | Unit |
|--------------------------------------|----------------------|--|--------|------|------|------|
| | | | Min | Type | Max | |
| Collector-Base Breakdown Voltage | BV _{CB0} | I _C =-50µA, I _E =0 | -50 | | | V |
| Collector-Emitter Breakdown Voltage | BV _{CEO} | I _C =-1mA, I _B =0 | -50 | | | V |
| Emitter-Base Breakdown Voltage | BV _{EBO} | I _E =-50µA, I _C =0 | -5 | | | V |
| Collector Cut-off Current | I _{CB0} | V _{CB} =-50V, I _E =0 | | | -0,5 | µA |
| Emitter Cut-off Current | I _{EBO} | V _{EB} =-4V, I _C =0 | | | -0,5 | µA |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =-5mA, I _B =0,25mA | | | -0,3 | V |
| DC Current gain | h _{FE} | V _{CE} =-5V, I _C =-1mA | 100 | 250 | 600 | |
| Input Resistance | R ₁ | | 7 | 10 | 13 | KΩ |
| Transition Frequency | f _T | V _{CE} =-10V, I _E =-5mA, f=100MHz | | 250 | | MHz |

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Tape And Reel Package

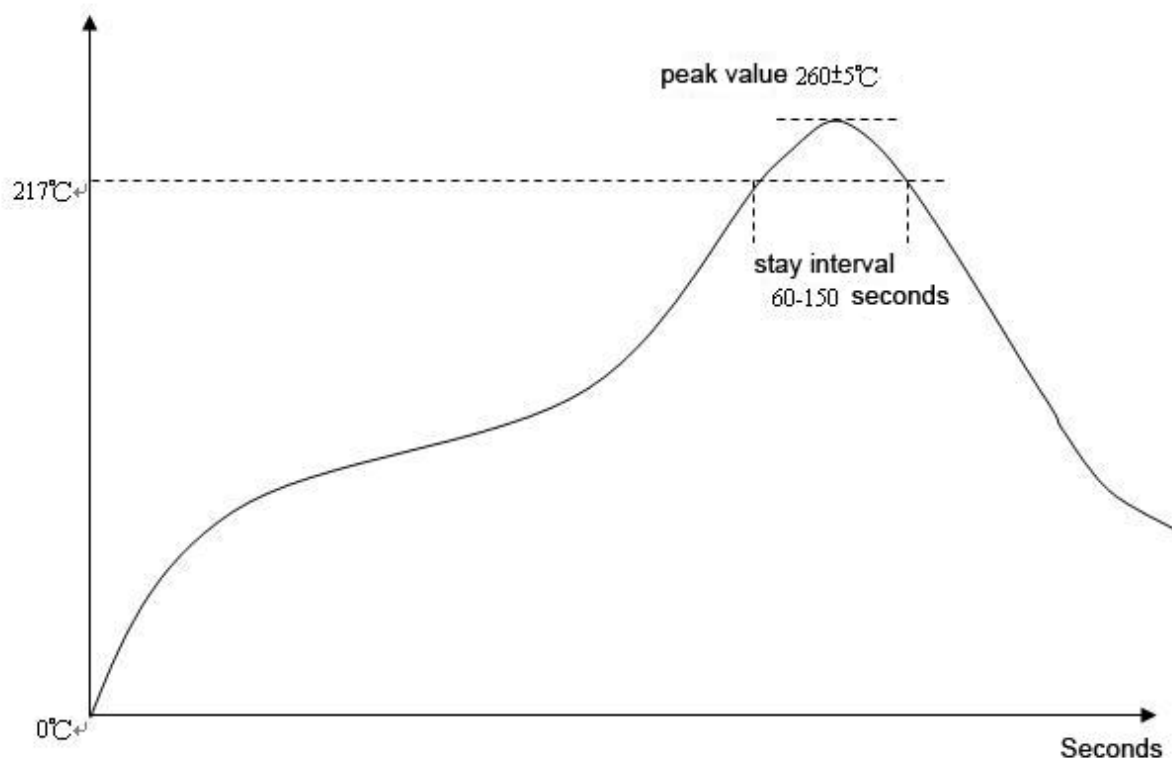


| Type | A | B | W | E | F | P ₀ | P ₁ | P ₂ | ΦD | ΦD ₁ | T1 |
|------|-----------|-----------|---------|-----------|-----------|----------------|----------------|----------------|-----------|-----------------|--------|
| | 1,73 ±0,1 | 1,85 ±0,1 | 8 ±0,30 | 1,75±0,01 | 3,5 ±0,05 | 4,00±0,10 | 4,00±0,10 | 2,00±0,05 | 1,55±0,03 | 0,4 ±0,5 | 1 ±0,1 |

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Lead Free Reflow Soldering Profile

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Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

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