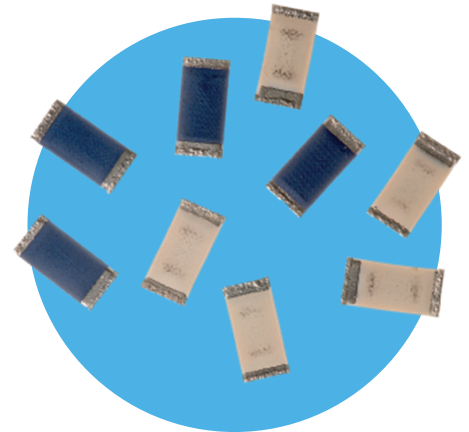


High Pulse Double-Sided Chip Resistors

HDSC Series

- Two parallel resistance elements in a single chip
- Excellent pulse withstand performance
- Enhanced working voltage
- Enhanced power rating
- Anti-sulphur



All Pb-free parts comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

Electrical Data

| | | 0805 | 1206 | 2010 | 2512 |
|-----------------------------------|-----------------|--|------|------|------|
| Power @70°C | W | 0.25 | 0.33 | 0.75 | 1.5 |
| 2 second overload power@25°C | W | 1.6 | 2.1 | 4.7 | 9.4 |
| Short pulse performance | | See graphs | | | |
| Resistance range | ohms | 1R0 to 1M0 | | | |
| Tolerance | % | 5, 10, 20 | | | |
| LEV | V | 150 | 200 | 400 | 500 |
| TCR | ppm/°C | <10R:300 ≥10R:100 | | | |
| Operating temperature | °C | -55 to +155 | | | |
| Dielectric withstand voltage | V | 300 | 500 | | |
| Thermal Impedance | °C/W | 210 | 160 | 80 | 50 |
| Pad & trace area for rated power* | mm ² | 40 | 50 | 60 | 100 |
| Values | | E24 preferred- other values to special order | | | |

*Recommended minimum pad & adjacent trace area for each termination for rated power dissipation on FR4 PCB

Physical Data

| Dimensions (mm) & Weight (mg) | | | | | | | |
|-------------------------------|----------|-----------|-------|----------|-------|----------|-----|
| | L | W | T max | A | B min | C | Wt. |
| 0805 | 2.0±0.15 | 1.25±0.15 | 0.7 | 0.3±0.15 | 0.9 | 0.3±0.1 | 5.0 |
| 1206 | 3.2±0.2 | 1.6±0.2 | 0.7 | 0.4±0.2 | 1.7 | 0.4±0.15 | 10 |
| 2010 | 5.1±0.3 | 2.5±0.2 | 0.8 | 0.6±0.3 | 3.0 | 0.6±0.25 | 42 |
| 2512 | 6.5±0.3 | 3.2±0.2 | 0.8 | 0.6±0.3 | 4.4 | 0.6±0.25 | 65 |

Construction

Thick film resistor material, overglaze and organic protection are screen printed on a 96% alumina substrate. Wrap-around terminations have an electroplated nickel barrier and solderable coating; this ensures excellent 'leach' resistance properties and solderability.

Marking

Components are not marked. Reels are marked with type, value, tolerance, date code and quantity.

Solvent Resistance

The body protection is resistant to all normal industrial cleaning solvents suitable for printed circuits.

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

HDSC Series

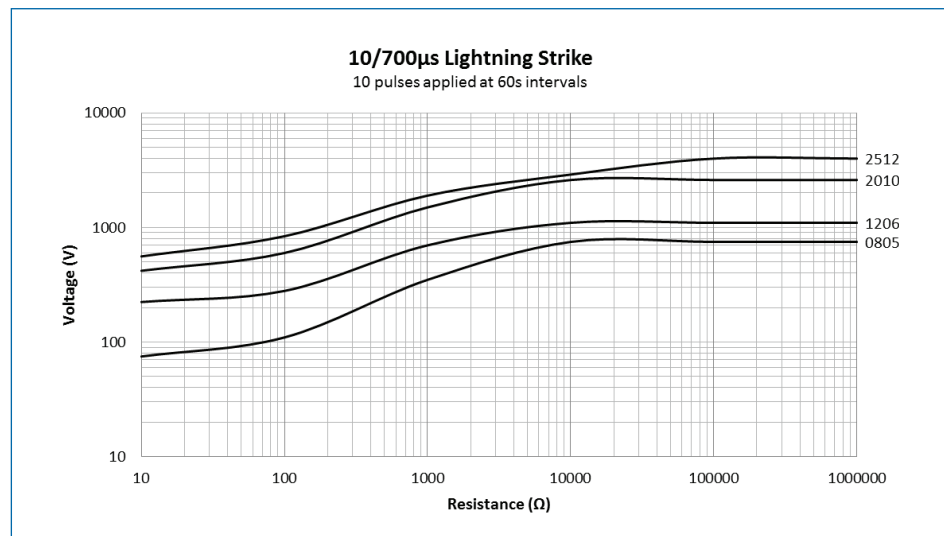
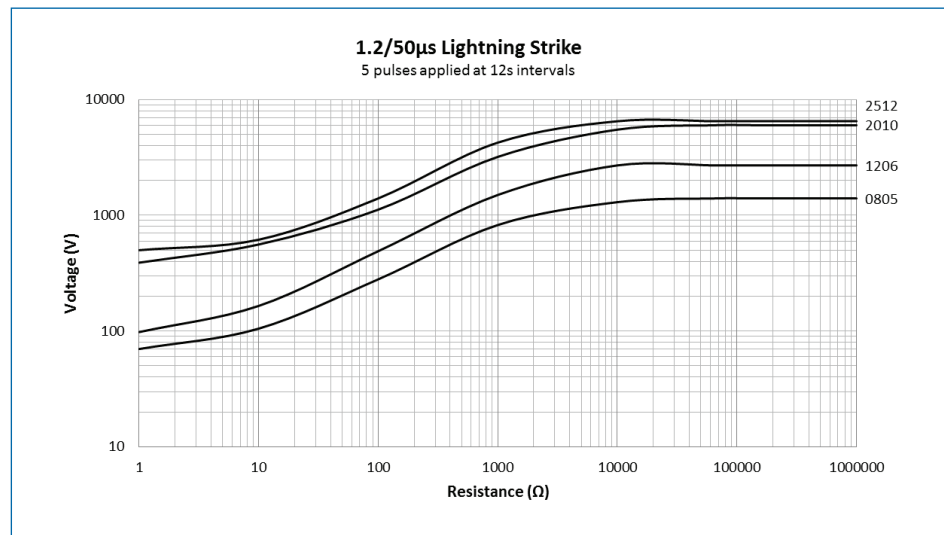
Performance Data

| | | Maximum | Typical |
|--|-----|---------------|---------|
| Load at rated power: 1000 hours at 70°C | ΔR% | 1 | 0.25 |
| Derating from rated power at 70°C | | Zero at 155°C | |
| Overload: 6.25 x rated power for 2 seconds | ΔR% | 1 | 0.1 |
| Shelf life test: 12 months at room temperature | ΔR% | 0.1 | 0.02 |
| Dry heat: 1000 hours at 155°C | ΔR% | 1 | 0.2 |
| Long term damp heat | ΔR% | 1 | 0.25 |
| Temperature rapid change | ΔR% | 0.25 | 0.05 |
| Resistance to sulphur-bearing gas ASTM-B-809 | ΔR% | 0.25 | 0.05 |
| Resistance to solder heat | ΔR% | 0.25 | 0.05 |

Pulse Performance Data

Lightning Surge

Resistors are tested in accordance with IEC 60 115-1 using both 1.2/50μs and 10/700μs pulse shapes. 10 pulses are applied. The limit of acceptance is a shift in resistance of less than 1% from the initial value



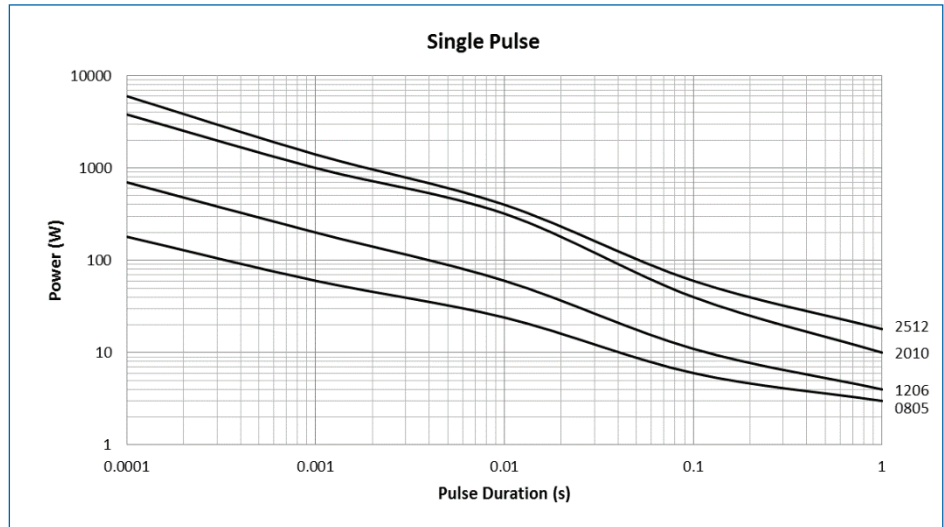
General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

HDSC Series

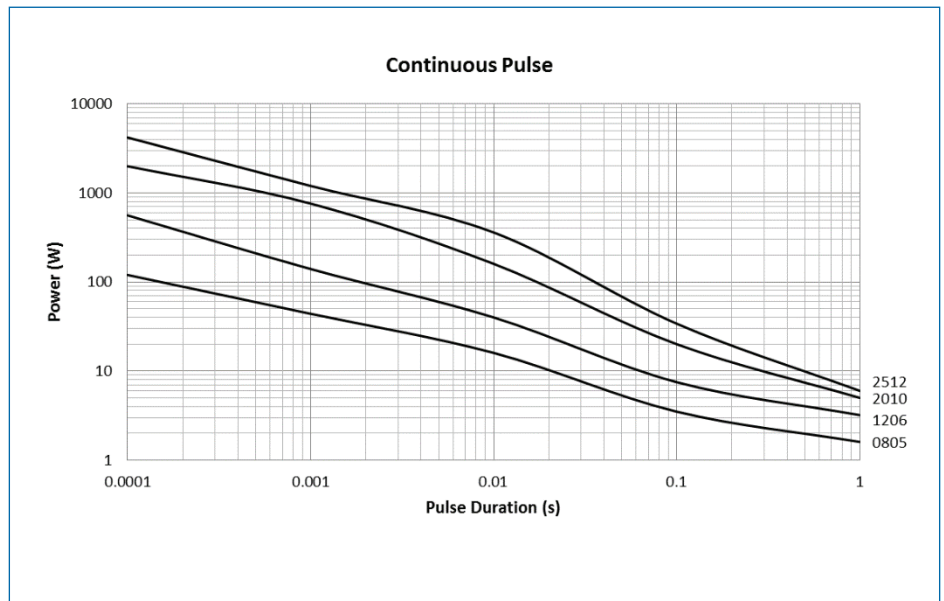
Single Pulse

The single impulse graph is the result of 50 impulses of rectangular shape applied at one-minute intervals. The limit of acceptance was a shift in resistance of less than 1% from the initial value.



Continuous Load Due to Repetitive Pulses

The continuous load graph was obtained by applying repetitive rectangular pulses where the pulse period was adjusted so that the average power dissipated in the resistor was equal to its rated power at 70°C. Again the limit of acceptance was a shift in resistance of less than 1% from the initial value..

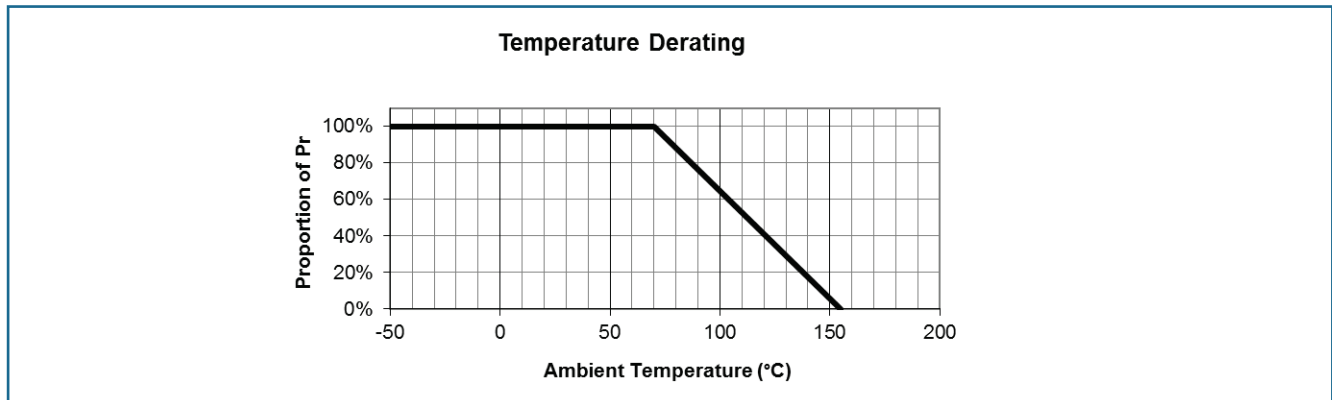


General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

HDSC Series

Thermal Performance Data



Packaging

0805 and 1206 resistors are supplied on 8mm carrier tape and 2010 and 2512 resistors are supplied on 12 mm carrier tape, all on 7 inch reels as per IEC 286-3.

Application Notes

HDSC resistors are ideally suited for handling by automatic methods due to their rectangular shape and the small dimensional tolerances. Electrical connection to a ceramic substrate or to a printed circuit board can be made by reflow or wave soldering of wrap-around terminations.

Wrap-around terminations provide good leach properties and ensure reliable contact. Due to the robust construction, the HDSC can be immersed in the solder bath for 30 seconds at 260°C. This enables the resistor to be mounted on one side of a printed circuit board and wire-leaded components applied on the other side. HDSC is compatible with typical Pb-free soldering materials and temperature profiles.

HDSC resistors themselves can operate at a maximum temperature of 155°C. For soldered resistors, the joint temperature should not exceed 110°C. This condition is met when the stated power levels at 70°C and recommended pad and trace areas are used. Pad and trace area is defined as the total area of the solder pad plus all copper trace within two squares of the edge of the solder pad. Allowance should be made if smaller areas of copper are used.

Ordering Procedure

Example: HDSC2512-10KJ T18



| 1 | 2 | 3 | 4 | 5 | | |
|-------------|------|--|-----------|-------------------------|-----------|------------------------------------|
| Type | Size | Value | Tolerance | Termination & Packing | | |
| HDSC | 0805 | E24 = 3/4 characters R = ohms K = kilohms M = megohms | J = ±5% | Standard Pb-free finish | | |
| | 1206 | | K = ±10% | T3 | 0805 | |
| | 2010 | | M = ±20% | | 1206 | 3000/reel standard |
| | 2512 | | | T18 | 2512 | |
| | | | | T1 | All sizes | 1000/reel available |
| SnPb finish | | | | | | |
| | | | | PB | All sizes | Standard quantities as for Pb-free |

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.