

High Power Diodes Hockey Puk Version R 5200 R...C Series

Types : R5200R 36C

FEATURES

- ≠ Wide current range
- ≠ High voltage ratings up to 3600 V
- ≠ High surge current capabilities
- ≠ Case style R-PUK

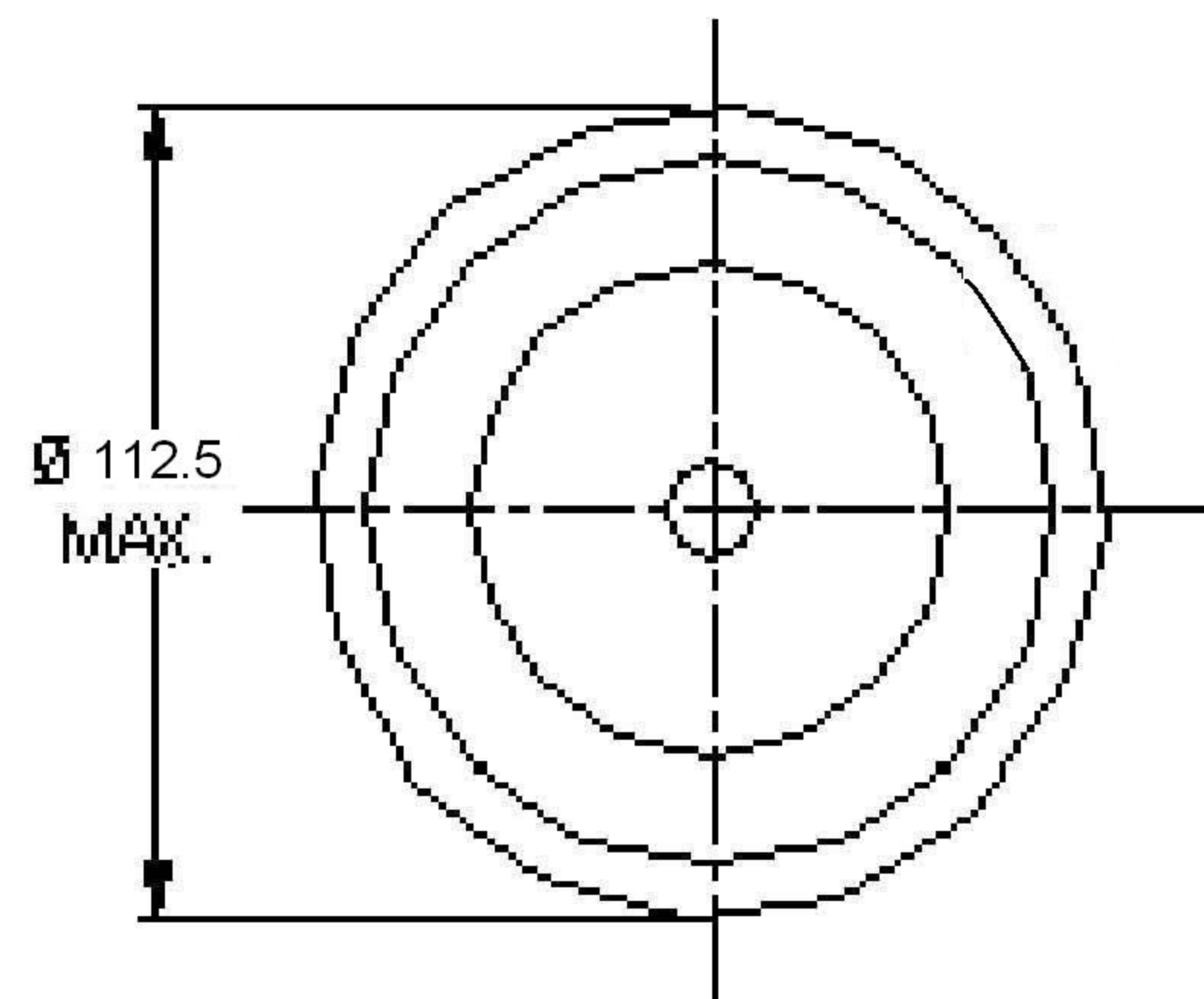
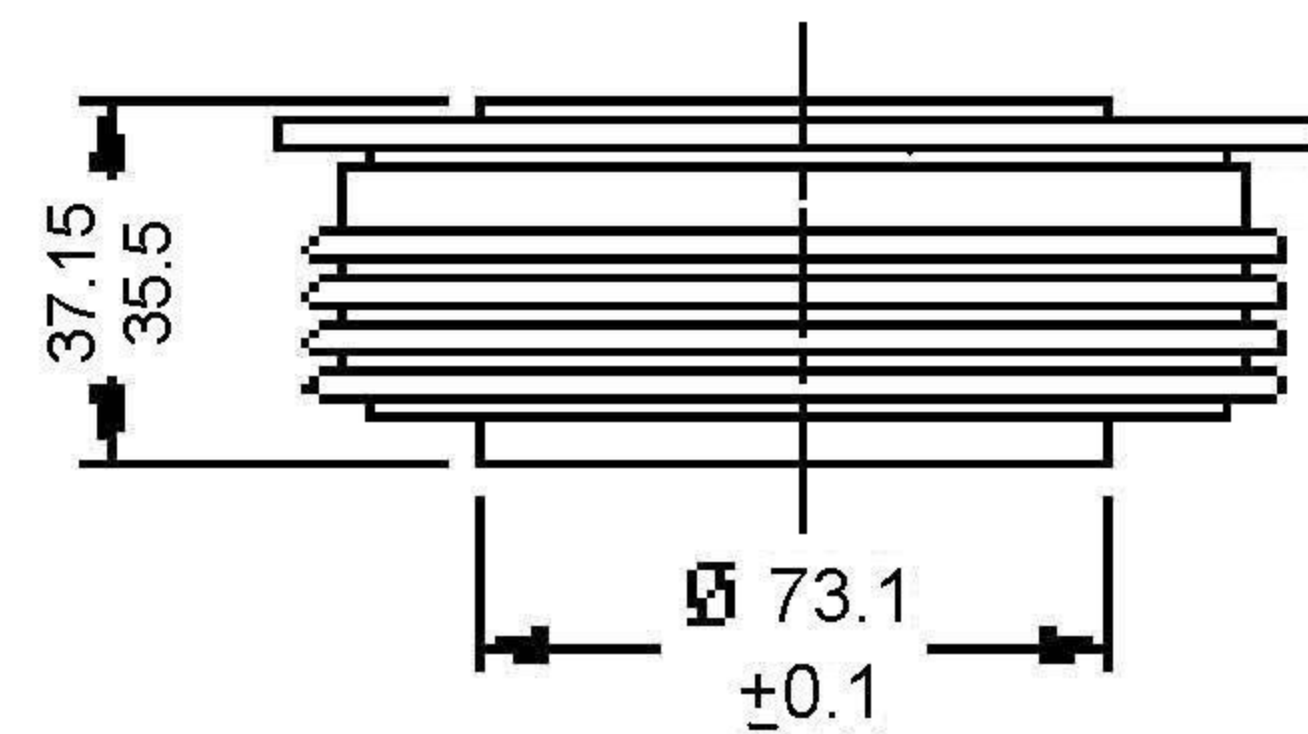
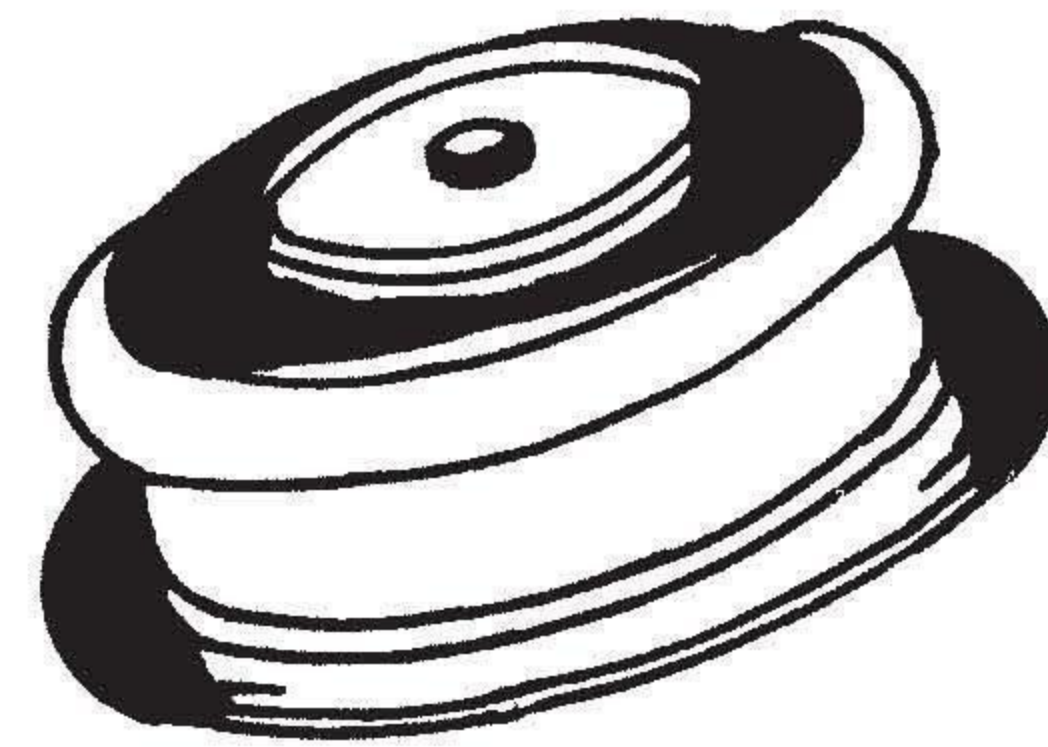
TYPICAL APPLICATIONS

- ≠ Converters
- ≠ High power drives
- ≠ Power supplies
- ≠ Traction Application

MAJOR RATINGS & CHARACTERISTICS

| Parameters | R5200R | Units |
|-----------------|--------------|-------------------|
| $I_{F(AV)}$ | 5200 | A |
| @ T_{hs} | 55 | °C |
| $I_{F(RMS)}$ | 8164 | A |
| @ T_{hs} | 55 | °C |
| I_{FSM} | 57 | KA |
| @ 50 Hz | | |
| I^2t | 16240 | KA ² s |
| @ 50 Hz | | |
| V_{RRM} range | 2400 to 3600 | V |
| T_J | -40 to 160 | °C |

R5200R (R-PUK)



ALL DIMENSION IN MILLIMETERS

STANDARD RECOVERY DIODES

Type:- R5200R SERIES

ELECTRICAL SPECIFICATION VOLTAGE RATINGS

| Type Number | Voltage Code | V_{RRM} , max. repetitive peak reverse voltage V | V_{RRM} , max. non- repetitive peak reverse voltage V | I_{RRM} max. @ $T_J = T_J$ max. mA |
|-------------|--------------|---|--|--|
| R5200R | 24 | 2400 | 2500 | 100 |
| | 26 | 2600 | 2700 | |
| | 28 | 2800 | 2900 | |
| | 30 | 3000 | 3100 | |
| | 32 | 3200 | 3300 | |
| | 34 | 3400 | 3500 | |
| | 36 | 3600 | 3700 | |

FORWARD CONDUCTION

| | Parameter | R5200R | Units | Conditions | | |
|--------------|--|--------|-------------------|---|-----------------------|---|
| $I_{F(AV)}$ | Max. average Forward current @ heat sink temperature | 5200 | A | 180° conduction, half sine wave double side cooled | | |
| | | 55 | °C | | | |
| $I_{F(RMS)}$ | Max. RMS Forward current | 8164 | A | @55°C heat sink temperature (double side cooled) | | |
| I_{FSM} | Max. peak one cycle Forward non-repetitive surge current | 57 | KA | t = 10ms | No voltage reappplied | Sinusodial half wave, Initial $T_J = T_J$ max. |
| I^2t | Maximum I^2t for fusing | 16240 | kA ² s | t = 10ms | No voltage reappplied | |
| V_O | Forward conduction threshold voltage | 0.9 | V | $T_J = T_J$ max. | | |
| r_f | Forward conduction slope resistance | 0.07 | mΩ | $T_J = T_J$ max. | | |
| V_{FM} | Max.peak Forward voltage drop | 1.4 | V | $I_{pk} = 6000$ A, $T_J = 160^\circ$ C max., $t_p = 10$ ms sine pulse | | |

THERMAL AND MECHANICAL SPECIFICATION

| | Parameter | R5200R | Units | Conditions |
|--------------|--|-------------------------|-------|---------------------------------|
| T_J | Max. operating temperature range | -40 to 160 | °C | |
| T_{stg} | Max. storage temperature range | -40 to 160 | | |
| R_{thJ-hs} | Max. thermal resistance, junction to heat sink | 0.024 | K/W | DC operation single side cooled |
| | | 0.012 | | DC operation double side cooled |
| F | Mounting force | Min. 27000 Max.47000 | N | |
| w t | Approximate weight | 1700 | g | |
| | Case style | (R-PUK) | | See outline |

STANDARD RECOVERY DIODE

Type: R5200R

MAXIMUM FORWARD CHARACTERISTIC

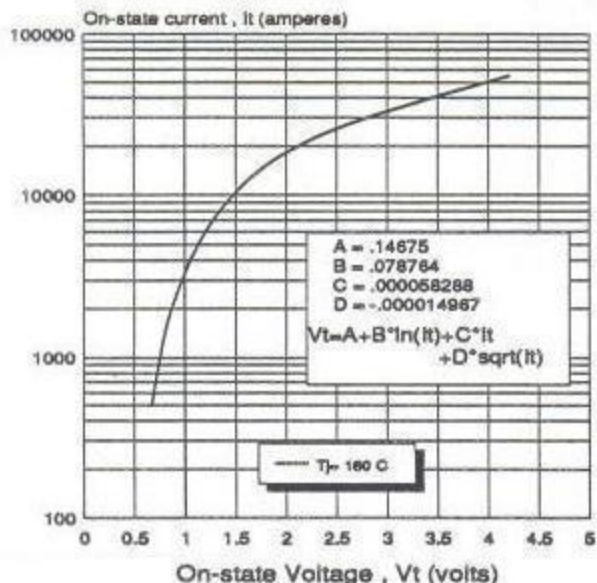


fig.No. 1

POWER DISSIPATION
Full Cycle Average

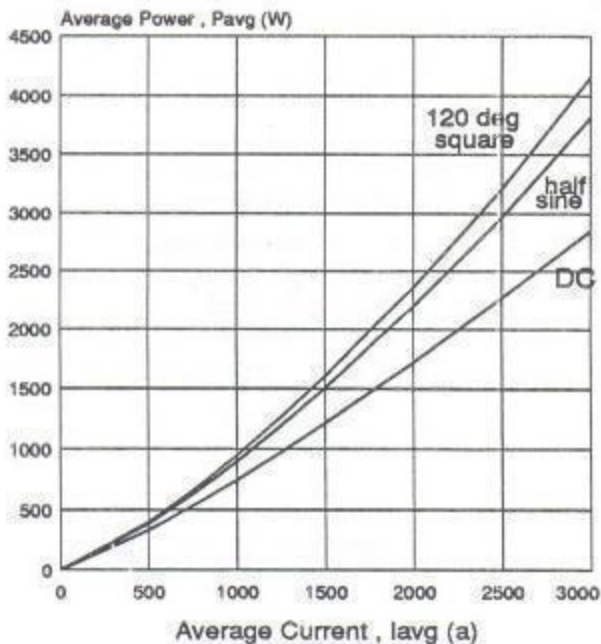


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THERMAL IMPEDANCE vs. ON-TIME

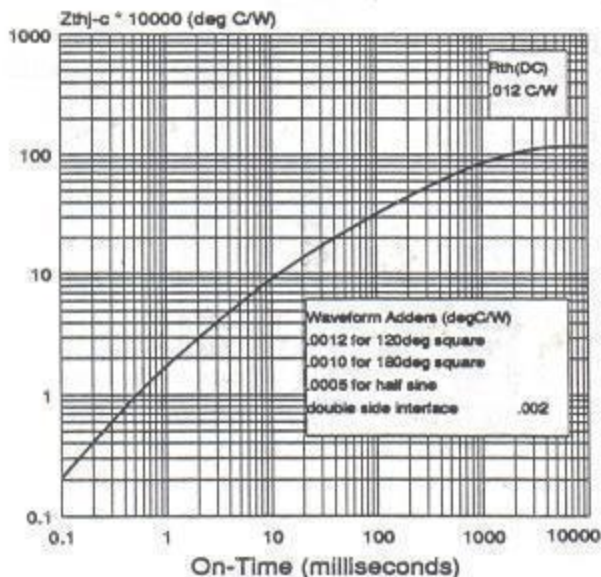


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MAXIMUM PEAK RECOVERY CURRENT

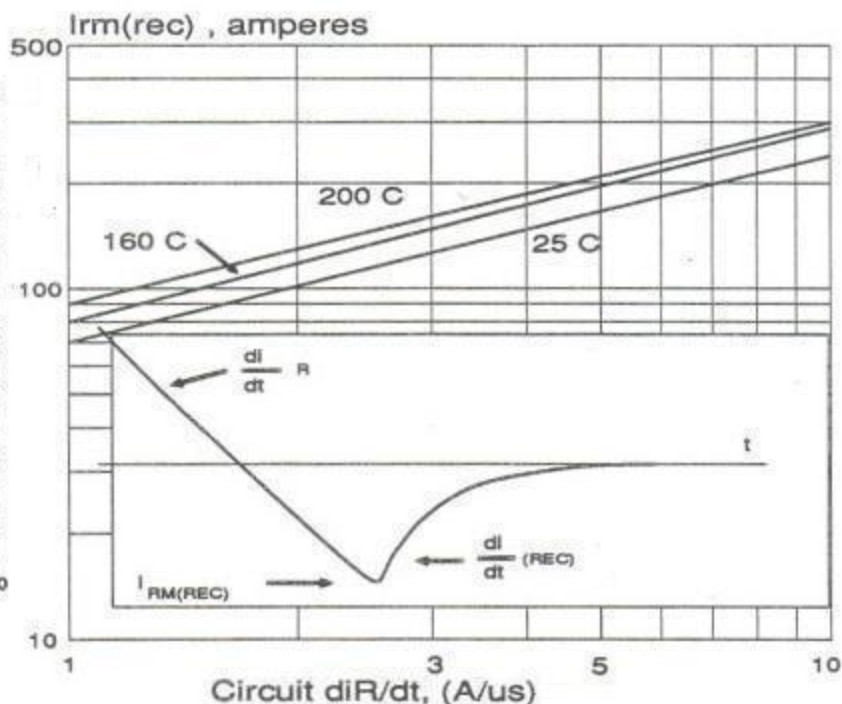


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