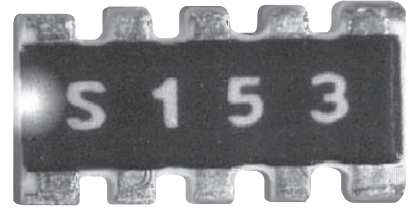


BCN Series

Features

- Sulphur resistant version available (Tested to ASTM-B809)
- AEC-Q200 (BCN10 and BCN164AB)
- Convex terminations
- Isolated and bussed versions



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

Summary of Types

| Type | Part Number Start | Width (mm) | Resistor Elements | Circuit | Package Size | Scalloped Convex | Square Convex |
|--------|-------------------|------------|-------------------|----------|--------------|------------------|---------------|
| BCN10 | BCN104AB | 1.0 | 0402 x 4 | Isolated | 0804 | | |
| BCN164 | BCN164A | 1.6 | 0603 x 4 | | 1206 | | |
| | BCN164AB | | | | | | |
| BCN168 | BCN168SB | | 0603 x 8 | Bussed | | | |
| | BCN168RB | | | | | | |

Electrical Data

| | | BCN10 | BCN164 | BCN168 |
|-----------------------------|--------|--|--------|------------|
| Resistor power rating @70°C | mW | 63 | | 32 |
| Package power rating @70°C | mW | 250 | | |
| Limiting element voltage | V | 25 | 50 | 25 |
| Maximum overload voltage | V | 63 | 125 | 63 |
| Resistance range | ohms | 10R – 1M0 | | 100R – 1M0 |
| Resistance tolerance | % | 1, 5 | | 5 |
| TCR | ppm/°C | ±200 | | |
| Standard values | | E24 (for 5% tolerance), E96 (for 1% tolerance) | | |
| Ambient temperature range | °C | -55 to +155 | | |

General Note

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All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

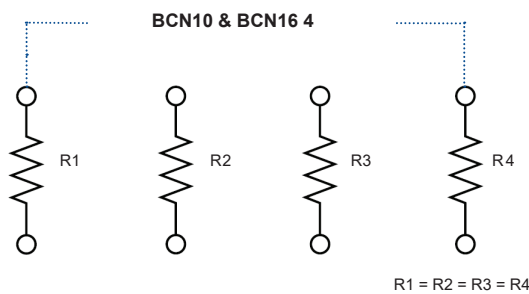
BI Technologies IRC Welwyn

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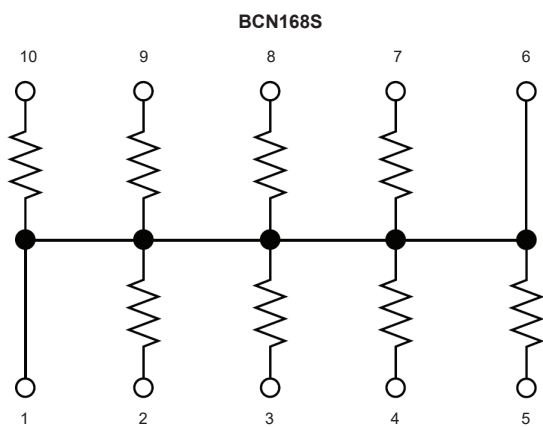
BCN Series

Circuits

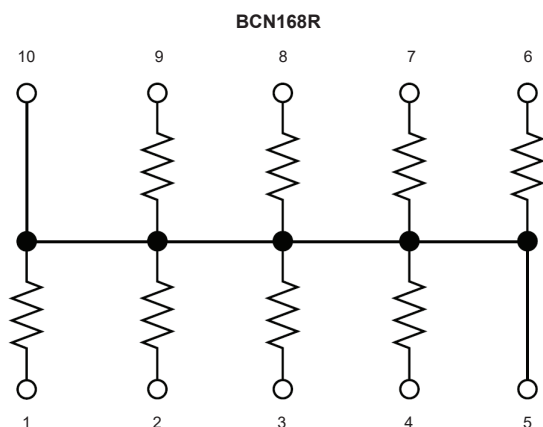
Isolated



Standard Bussed



Reverse Bussed



Environmental Data

| Test | Condition | $\Delta R\%$ (+0.1 Ω) |
|---------------------------------|--|-------------------------------|
| Load life | 1000 hrs cyclic load @ 70°C | 3 |
| Short term overload | 2.5 x rated voltage for 5s | 2 |
| High temperature operation | 1000 hrs @ 155°C | 3 |
| Temperature cycling | 5 cycles, -55 to +155°C | 1 |
| Moisture resistance | 1000 hrs @ 40°C, 95% RH | 3 |
| Resistance to solder heat | 260°C for 10s | 1 |
| Sulphur resistance ¹ | 1000 hrs @ 50°C, 92% RH, 3-5ppm H ₂ S | 0.5 |

Note 1 – Anti-sulphur construction only

General Note

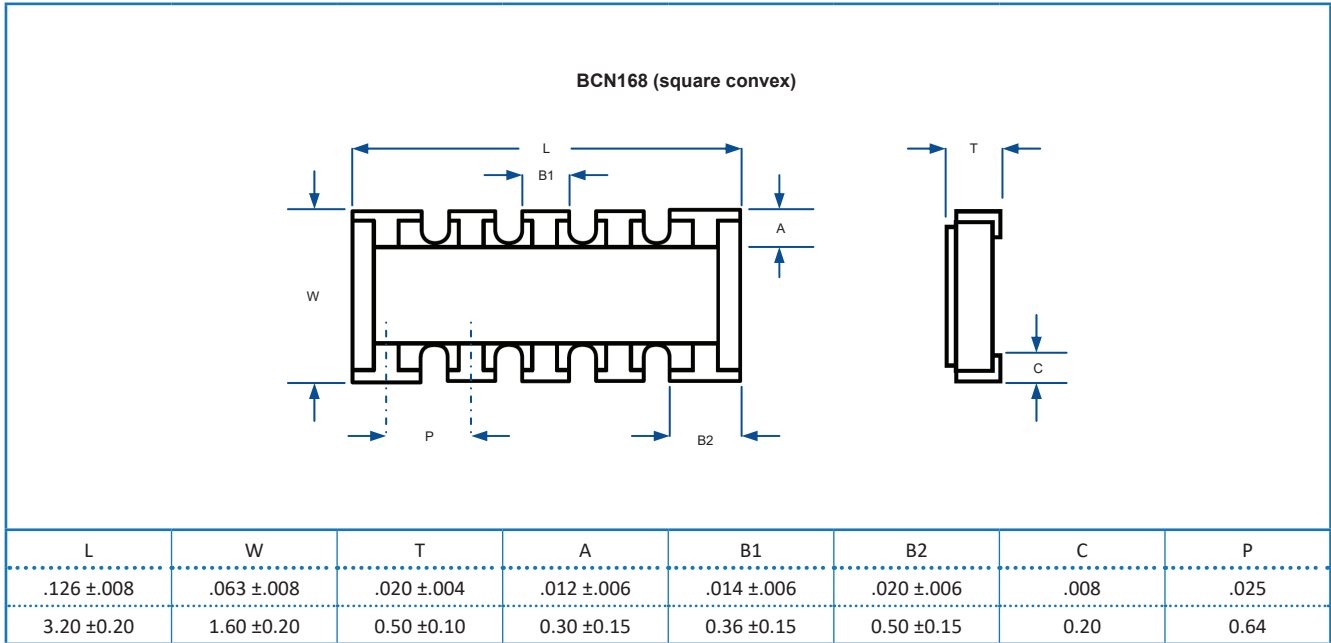
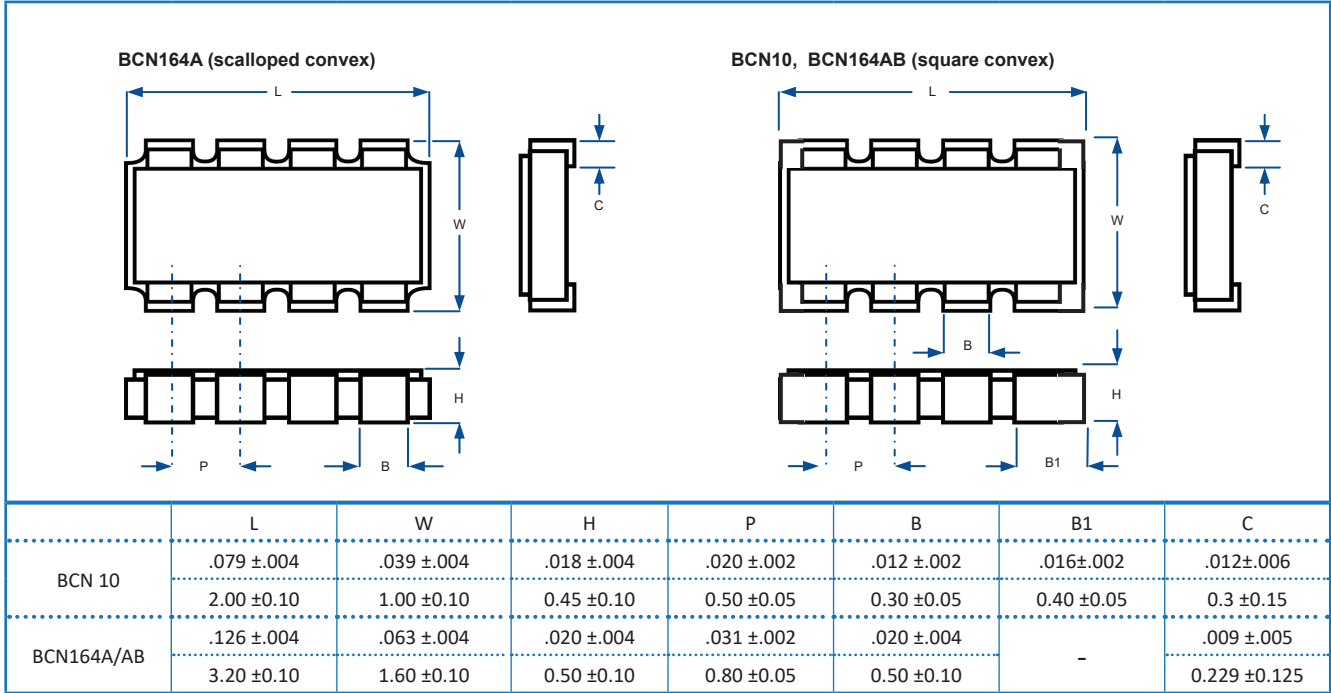
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BCN Series

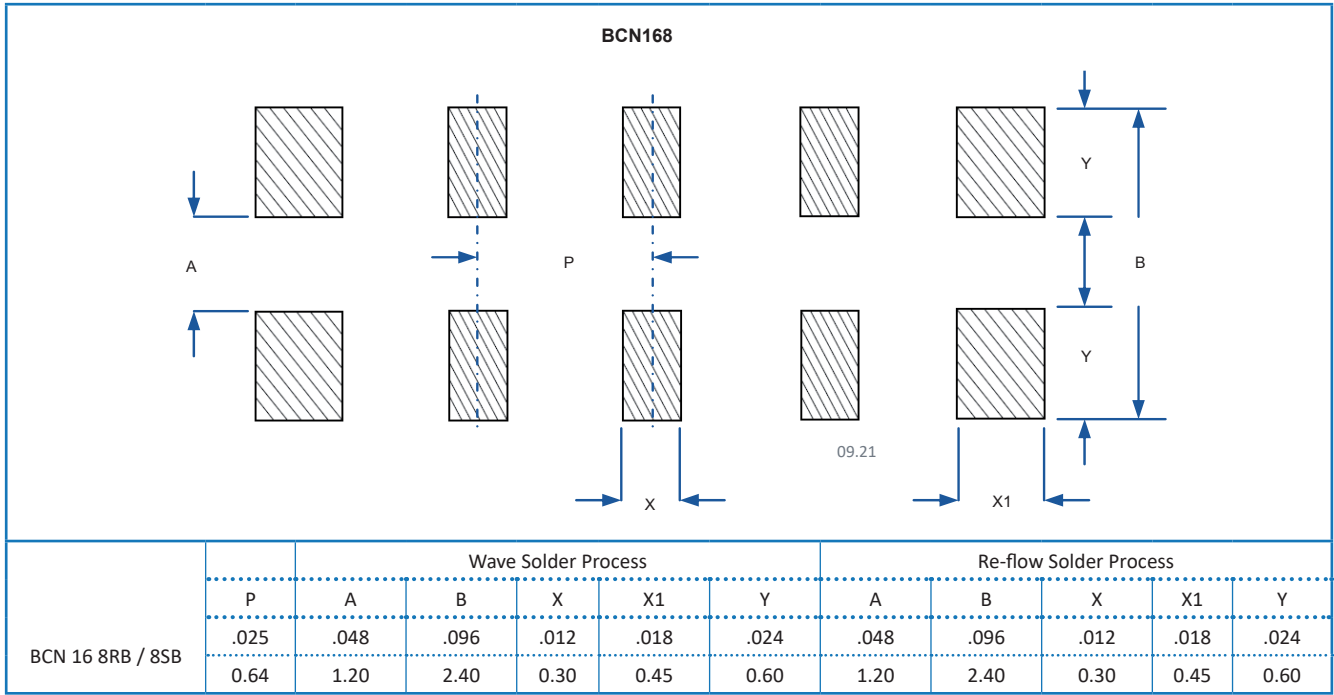
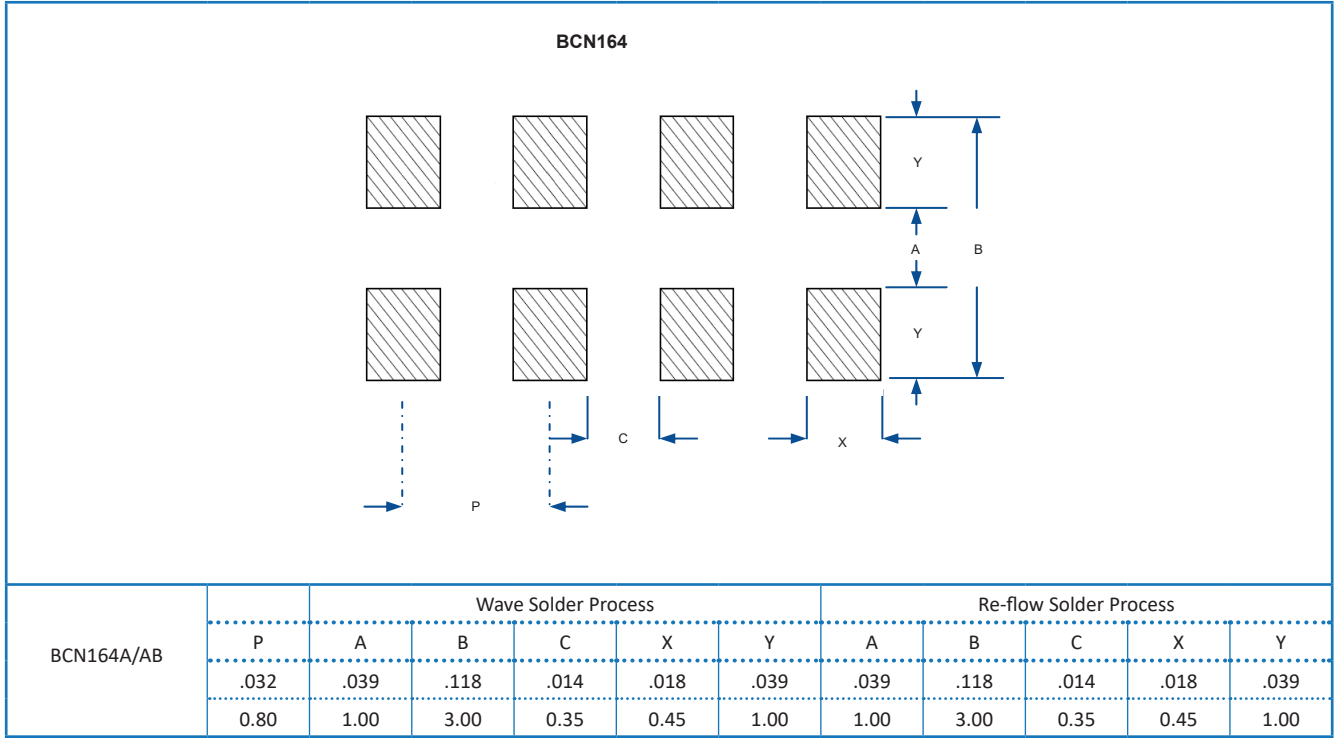
Physical Data (Inch /mm)



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BCN Series

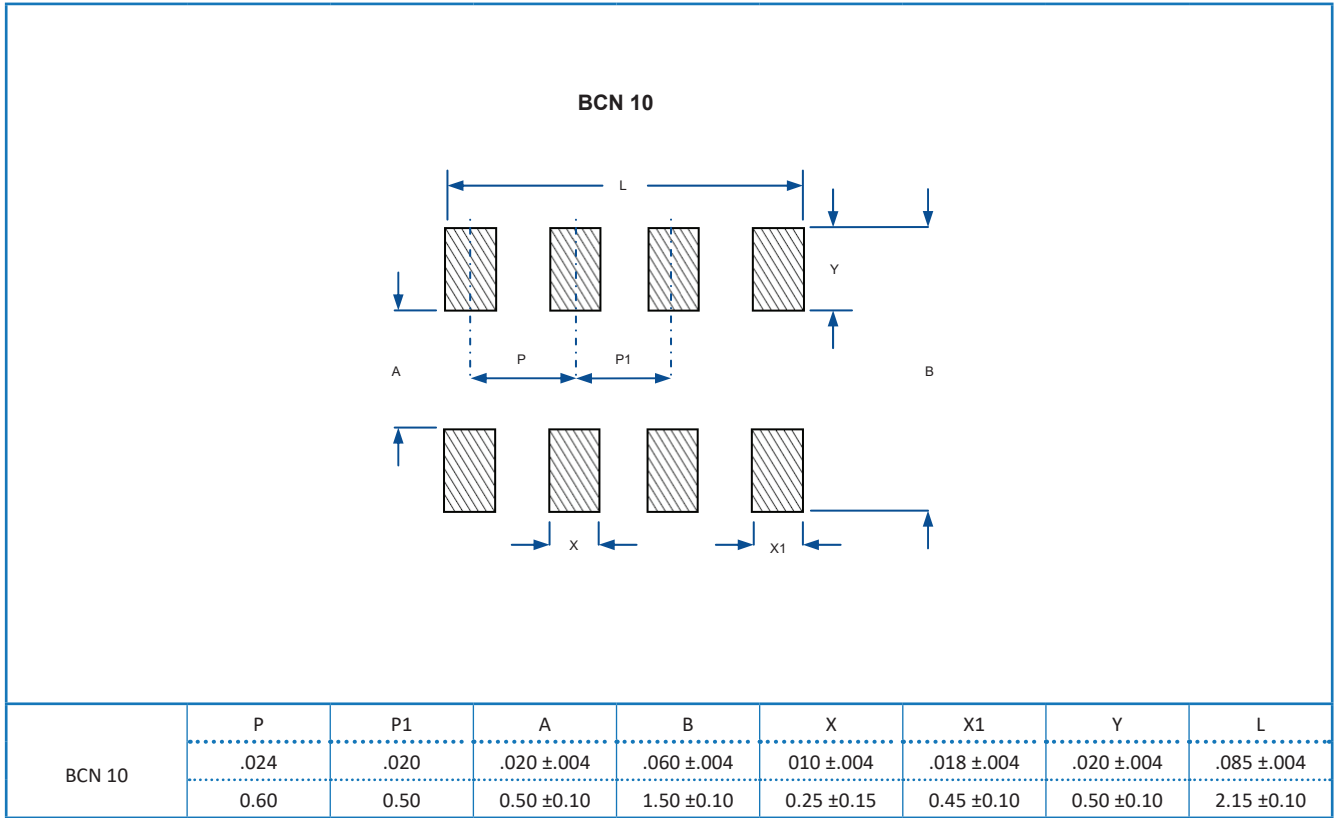
Solder pad layout (Inch / mm)



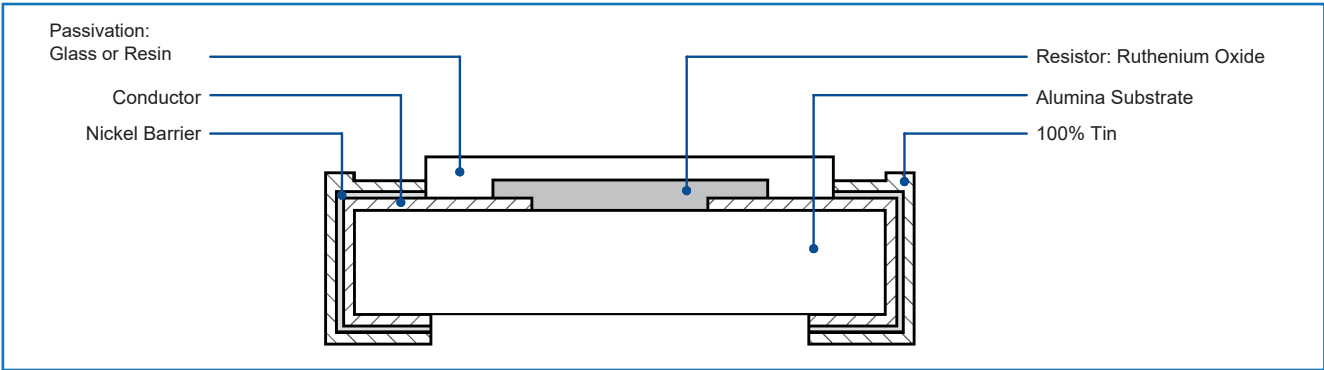
General Note
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BCN Series

Solder pad layout (Inch / mm)



Construction



Marking

BCN parts may be unmarked or marked with ohmic values. If marked, 5% tolerance parts are marked with three characters (e.g. 102). 1% tolerance parts may be marked with 3 or 4 characters (e.g. 102, 1001, 4991)

BCN Series

Ordering Procedure

Example: BCN164AB102J7S (BCN 1.6mm wide, 4 resistors, isolated circuit, square edge, convex terminations at 1 kilohm $\pm 5\%$, on a 7" reel, anti-sulphur construction, Pb-free).

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | C | N | 1 | 6 | 4 | A | B | 1 | 0 | 2 | J | 7 | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | |

| 1 Series | 2 Width | 3 Number of Resistors | 4 Circuit | 5 Edge | 6 Value | 7 Tolerance | 8 Packaging | 9 Construction |
|-------------|------------|--------------------------|-------------------|-----------|--|--------------------|----------------------|-------------------|
| BCN | 10=1.0mm | 4 | A=Isolated | Blank= | 3 digits for E24 at 5% | F= $\pm 1\%$ | 7=7" reel (standard) | Blank= Standard |
| | 16=1.6mm | 8 | S=Standard bussed | Scalloped | | J= $\pm 5\%$ | 13=13" reel | |
| | | | R=Reverse bussed | B=Square | 4 digits for uniquely E96 and for all values at 1% | (Blank for jumper) | | S=Anti-sulphur |
| | | | | | JP=Jumper | | | |

| Valid Options (1 - 5) | | | | | | | | Valid Options (6 & 9) | | | | Packaging Quantity & Tape (8) | | | |
|-----------------------|---|---|---|---|---|---|---|---|--|--|--|---|--|--|--|
| B | C | N | 1 | 0 | 4 | A | B | JP=Jumper, S=Anti-sulphur (5% tolerance & 7" reel only) | | | | 7=10,000/reel, 13=40,000/reel, Paper tape | | | |
| B | C | N | 1 | 6 | 4 | A | | JP=Jumper, S=Anti-sulphur (1% tolerance & 7" reel only) | | | | 7=5000/reel, 13=20,000/reel, Paper tape | | | |
| B | C | N | 1 | 6 | 4 | A | B | JP=Jumper, S=Anti-sulphur | | | | | | | |
| B | C | N | 1 | 6 | 8 | S | B | | | | | | | | |
| B | C | N | 1 | 6 | 8 | R | B | S=Anti-sulphur (7" reel only) | | | | | | | |

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