



Features

- D²PAK housing
- Low inductance
- Resistor electrically isolated from the backplate
- High power rating
- Compatible with lead free solder reflow temperatures
- RoHS compliant*
- AEC-Q200 compliant

PWR263S-35 Series Power Resistor

General Information

Bourns® PWR263S-35 Series is a TO263 DPAK style power resistor. Manufactured using thick film on alumina ceramic technology, it is used in current measurement, snubber, bleeder and discharge circuits.

Electrical & Thermal Characteristics

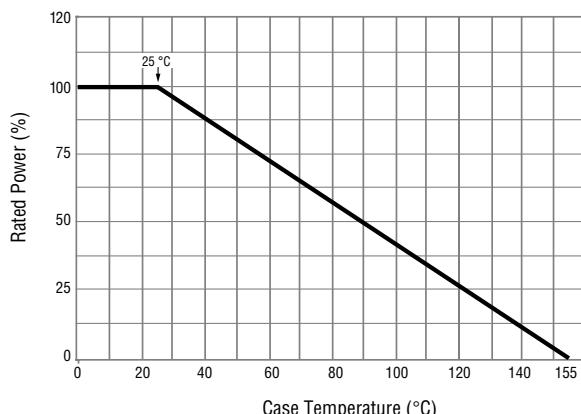
Parameter	Value(s)
Resistance (See Popular Resistance Values table)	0.02 Ω to 130 KΩ
Power Rating @ 25 °C Case Temperature	35 W
Tolerance	±1 %** ; ±5 %
TCR 0.02 Ω<R<130.0K Ω	±100 PPM/°C
Thermal Resistance - R _{thj}	3.7 °C/W
Inductance	0.1 μH maximum
Operating Voltage	√P*R with a maximum of 250 V
Dielectric Strength	2 KV AC
Insulation Resistance	10 GΩ
Operating Temperature	-55 °C to 155 °C

** Available for most values. Check Popular Resistance Values table.

Reliability Characteristics

Parameter	Specification
Short Term Overload (2x Pr for R < 2 Ω, 1.6 x Pr for R ≥ 2 Ω, V < 1.5 x Operating Voltage)	ΔR ±0.25 %
Load Life (1000 hours at rated power)	ΔR ±1.0 %
Thermal Shock (-55 °C to 155 °C, 5 cycles)	ΔR ±0.5 %
Resistance to Soldering Heat (10 sec. at 270 °C)	ΔR ±0.5 %
Vibration (20 G 10-2000 Hz .06 " D.A.)	ΔR ±0.25 %
Moisture Sensitivity Level	1

Derating Curve



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Material Characteristics

Resistor Thick film
Substrate Alumina (AL203)
Housing Epoxy
Pins..... Tinned Copper (Sn/Cu)
Flammability Conforms to UL-94V0

Popular Resistance Values

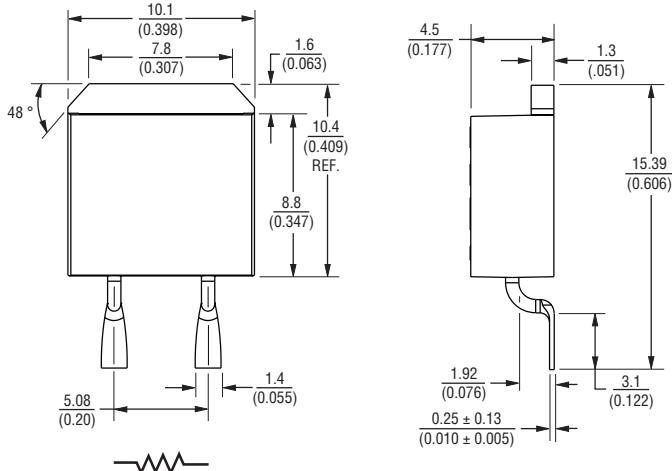
Code	Resistance Value	Code	Resistance Value
R020	0.02 Ω***	1000	100 Ω
R025	0.025 Ω***	1200	120 Ω
R030	0.03 Ω***	1500	150 Ω
R033	0.033 Ω***	2000	200 Ω
R040	0.04 Ω***	2500	250 Ω
R050	0.05 Ω***	3000	300 Ω
R075	0.075 Ω***	3300	330 Ω
R100	0.1 Ω	4000	400 Ω
R150	0.15 Ω	4700	470 Ω
R200	0.2 Ω	5000	500 Ω
R250	0.25 Ω	5600	560 Ω
R300	0.3 Ω	7500	750 Ω
R330	0.33 Ω	1001	1.0 KΩ
R400	0.4 Ω	1501	1.5 KΩ
R500	0.5 Ω	2001	2.0 KΩ
R750	0.75 Ω	2501	2.5 KΩ
R1000	1 Ω	3001	3.0 KΩ
R1500	1.5 Ω	3301	3.3 KΩ
R2000	2 Ω	4001	4.0 KΩ
R2500	2.5 Ω	5001	5.0 KΩ
R3000	3 Ω	7501	7.5 KΩ
R3300	3.3 Ω	1002	10 KΩ
R4000	4 Ω	1502	15 KΩ
R5000	5 Ω	2002	20 KΩ
R7500	7.5 Ω	2502	25 KΩ
R8000	8 Ω	3002	30 KΩ
R10000	10 Ω	3302	33 KΩ
R12000	12 Ω	4002	40 KΩ
R15000	15 Ω	4702	47 KΩ
R20000	20 Ω	5002	50 KΩ
R25000	25 Ω	5602	56 KΩ
R27000	27 Ω	6802	68 KΩ
R30000	30 Ω	7502	75 KΩ
R33000	33 Ω	8202	82 KΩ
R40000	40 Ω	1003	100 KΩ
R47000	47 Ω	1153	115 KΩ
R50000	50 Ω	1203	120 KΩ
R56000	56 Ω	1253	125 KΩ
R75000	75 Ω	1303	130 KΩ

*** 5 % Tolerance

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Product Dimensions



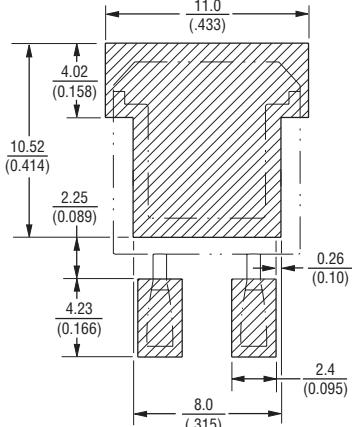
DIMENSIONS: **MM
(INCHES)**

TOLERANCE: ± 0.38 (± 0.015) UNLESS OTHERWISE NOTED

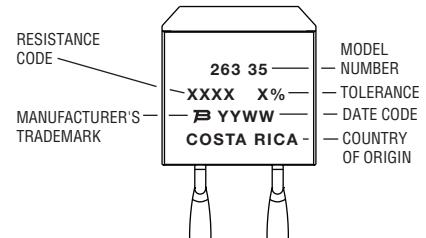
LEAD 0.102 MAX AT MOUNTING

COPLANARITY: (0.004) SURFACE

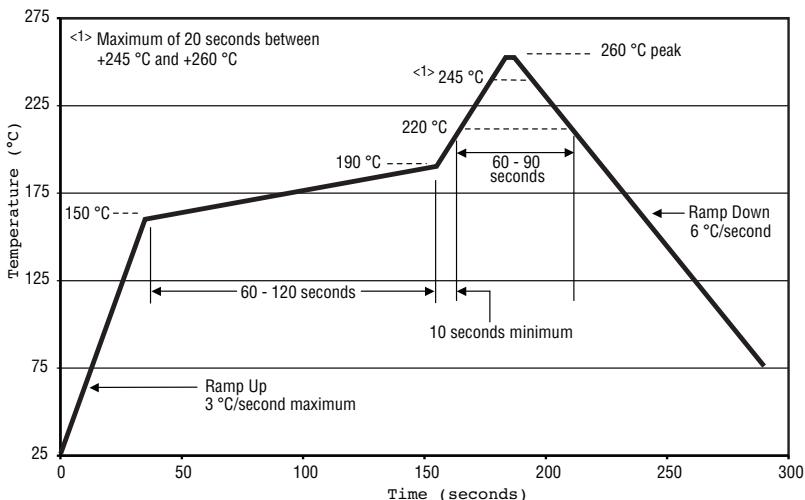
Recommended Pad Layout



Typical Part Marking



Soldering Profile



Power dissipation is 3.5 W at an ambient temperature of 25 °C when mounted on a double-sided copper board using FR4 standard, 70 µm of copper, 39 x 30 x 1.6 mm.

How to Order

PWR 263 S - 35 - 10R0 F E

- Model _____
PWR = Power Resistor
- Package _____
263 = D²PAK
- Pin Style _____
S = Surface Mount
- Power _____
35 = 35 W
- Resistance Value _____
<100 ohms ... "R" represents decimal point (examples: 7R50 = 7.5 Ω; R500 = 0.5 Ω)
≥100 ohms.... First three digits are significant, fourth digit represents number of zeros to follow (examples: 2000 = 200 ohms; 3002 = 30K ohms)
- Absolute Tolerance _____
J = 5 %
F = 1 %
- Packaging _____
E = Tape & Reel
Blank = Tubes

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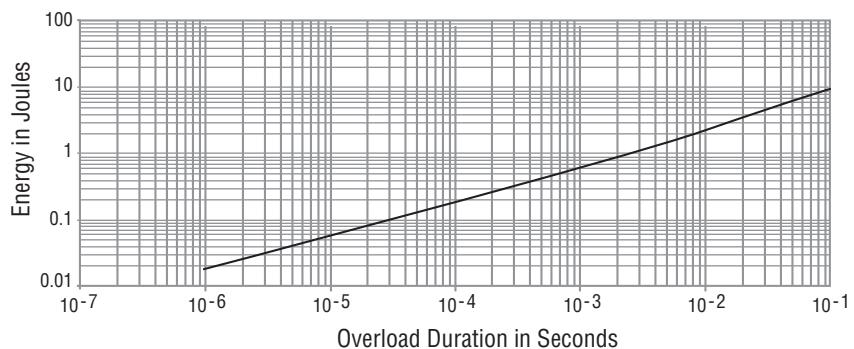
Users should verify actual device performance in their specific applications.

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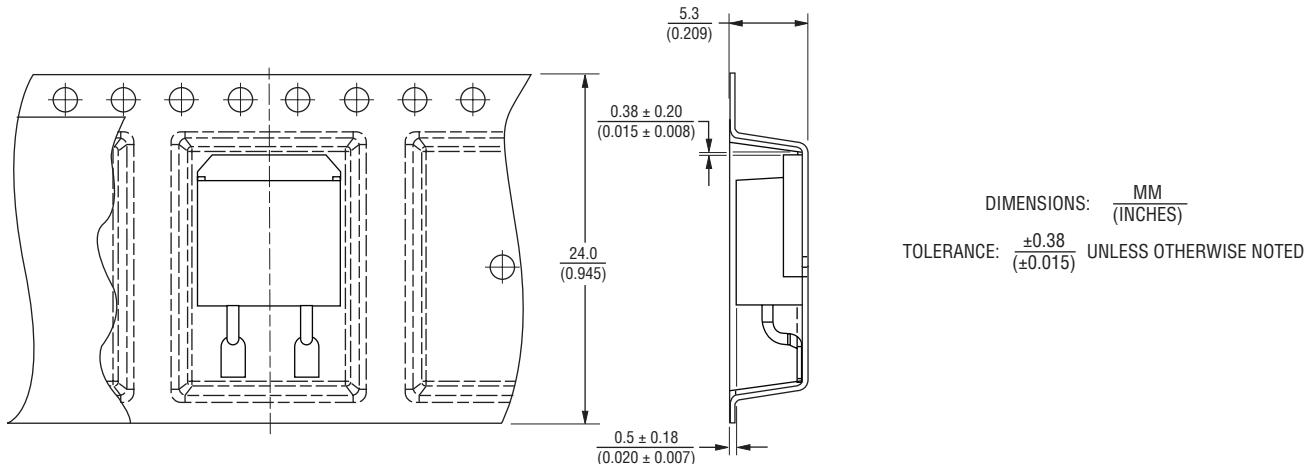
Pulse Power Rating



The energy absorbed by the resistor expressed in Joules can be calculated by multiplying the peak power of the pulse in watts times the length of the pulse in seconds.

The energy should not exceed the limits shown in the graph. The overload voltage should not exceed 1.5 times the maximum operating voltage.

Packaging Specifications



BOURNS®

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EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

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REV. 12/20

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