Power Inductor – RA7338-AE

For Microchip 1600W Bus Balancer Reference Design

- High current, high inductance power inductors
- Designed for high current power supply applications
- Flat wire windings provide extremely low DC and AC resistance.
- Suitable for high temperature environments, up to 125°C ambient
- AEC-Q200 Grade 1 qualified (–40°C to +125°C)
- Shield has solderable tabs for additional mounting stability.

Core material: Ferrite
Environmental: RoHS compliant, halogen free
Terminations: RoHS compliant tin-silver over copper
Shield tabs: RoHS compliant bright tin over nickel over stainless steel
Weight: 109 g
Ambient temperature: –40°C to +125°C with Irms current,
Maximum part temperature: +165°C (ambient + temp rise).
Storage temperature: Component: –40°C to +85°C.
Tray packaging: –40°C to +80°C
Moisture Sensitivity Level (MSL): 1 (unlimited floor life at <30°C / 85% relative humidity)
Failures in Time (FIT) / Mean Time Between Failures (MTBF): 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
Packaging: 9 parts per tray

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (µH)</th>
<th>DCR (mOhms)</th>
<th>SRF (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA7338-AE</td>
<td>17.6</td>
<td>0.68 0.75</td>
<td>9.25</td>
<td>19 22 24</td>
<td>34.0 44.5</td>
</tr>
</tbody>
</table>

1. Inductance tested at 100 kHz, 0.1 Vrms on Agilent/HP 4192A.
2. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.
3. DC current at 25°C that causes an inductance drop of 30% (typ) from its value without current. Click for temperature derating information.
4. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.
5. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
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Typical L vs Current

Inductance (µH)

RA7338-AE

Current (A)

0.1 1 10 100

Typical L vs Frequency

Inductance (µH)

RA7338-AE

Frequency (MHz)

0.01 0.1 1 10