



IEC QUALITY ASSESSMENT SYSTEM (IECQ)

covering Electronic Components,
Assemblies, Related Materials and Processes

For rules and details of the IECQ visit www.iecq.org

Schedule of Scope to Certificate of Conformity

Approved Component - Capability

IECQ Certificate No.: IECQ-C BSI 14.0053

CB Certificate No.: E059/CA

Schedule Number: IECQ-C BSI 14.0053-S

Rev No.: 12

Revision Date: 2020/02/12

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Basic Technology

Thick Film passive and Hybrid Integrated Circuits

Construction:

Alumina Substrate

Resistors:

Ruthenium based, screen printed, laser trimmed

Conductors:

Gold: 5 multilayer on dielectric, 1 on alumina top and reverse
Palladium silver: 1 layer on dielectric and alumina

Terminations:

By soldered leadouts

Add on Components

Types:

Surface Mount Diodes, transistors

Assessment Category:

Level K

Packages and Sealing:

Integral substrate / package maximum area 1522 mm²
Maximum number of leads 20 pin SIL, 40 pin DIL

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BSI, Kitemark Court Davy Avenue Knowlhill Milton Keynes MK5 8PP UK



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Boundaries of Capability:

Resistors:

Range;	4.44Ω to 4MΩ
10Ω / sq decade. Less than 10Ω	± 0.1Ω
10Ω – 100Ω / sq decades. 10Ω - 100Ω	± 1.0%
100Ω, 1KΩ, 10KΩ, 100KΩ / decades 100Ω to 300KΩ	±0.5%
100KΩ, 1MΩ / sq decades. 300KΩ – 2MΩ	± 1.0%
1MΩ / sq decade. > 2MΩ	± 5.0%
Matching tolerance 13Ω – 130KΩ	± 0.3%
TCR 10Ω / sq decade	± 250ppm/°C
TCR 100Ω, 1KΩ, 10KΩ, 100KΩ / sq decades	± 100ppm/°C
TCR 1MΩ / sq decade	± 250ppm/°C
TCR tracking 130Ω – 130KΩ	± 50ppm/°C
Stability	1% - 5%
Storage Temperature	- 65°C to +150°C
Operating Range	- 55°C to +125°C (-40°C Add on components)
Substrate Power	6.2mW/mm ² @ +70°C
Screening	Level K, others by agreement with the customer
Customer Participation in Design	Any level by agreement

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BS CECC 63200	Test	Conditions	CQC
4.5.1	Storage at High Temperature	150°C, 168 hours	6,7
4.5.2	Storage at Low Temperature	- 65°C, 168 hours	6,7
4.5.3	Damp Heat; Steady State	56 days, 55°C, 90%RH	6,7
4.5.6	Vibration	78Hz to 2000Hz 196m/s ²	7
4.5.7	Acceleration	5000g Y1	7
4.5.8	Rapid Change of Temperature	10 cycles 150°C - 65°C	6,7
4.5.10	Solderability	235°C, 2s	6,7
4.5.11	Resistance to Soldering Heat	350°C, 3.5s	6,7
4.5.12	Terminal Robustness	2 bends, 1 direction, 0.5Kgm	3,4,6,7
4.5.14	Endurance	2000 hours @ +125°C	6,7
4.5.16	Flammability	10s	7

Note: It may not be possible to achieve all the individual limits of capability in combination.

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