Multilayer ceramic capacitors

Chip, C0G

Series/Type: **Chip**

Date: February 2009

The following products presented in this data sheet are being withdrawn.

Substitute Products: See www.epcos.com/withdrawal_mlcc

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37940K5560J070		2009-06-26	2010-06-30	2010-12-31
B37940K5560J001		2009-06-26	2010-06-30	2010-12-31
B37940K5680J060		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37940K5680J070		2009-06-26	2010-06-30	2010-12-31
B37940K5680J001		2009-06-26	2010-06-30	2010-12-31
B37940K5820J060		2009-06-26	2010-06-30	2010-12-31
B37940K5820J070		2009-06-26	2010-06-30	2010-12-31
B37940K5820J001		2009-06-26	2010-06-30	2010-12-31
B37940K5101J060		2009-06-26	2010-06-30	2010-12-31
B37940K5101J070		2009-06-26	2010-06-30	2010-12-31
B37940K5101J001		2009-06-26	2010-06-30	2010-12-31
B37940K5121J060		2009-06-26	2010-06-30	2010-12-31
B37940K5121J070		2009-06-26	2010-06-30	2010-12-31
B37940K5121J001		2009-06-26	2010-06-30	2010-12-31
B37940K5151J060		2009-06-26	2010-06-30	2010-12-31
B37940K5151J070		2009-06-26	2010-06-30	2010-12-31
B37940K5151J001		2009-06-26	2010-06-30	2010-12-31
B37940K5181J060		2009-06-26	2010-06-30	2010-12-31
B37940K5181J070		2009-06-26	2010-06-30	2010-12-31
B37940K5181J001		2009-06-26	2010-06-30	2010-12-31
B37940K5221J060		2009-06-26	2010-06-30	2010-12-31
B37940K5221J070		2009-06-26	2010-06-30	2010-12-31
B37940K5221J001		2009-06-26	2010-06-30	2010-12-31
B37940K5271J060		2009-06-26	2010-06-30	2010-12-31
B37940K5271J070		2009-06-26	2010-06-30	2010-12-31
B37940K5271J001		2009-06-26	2010-06-30	2010-12-31
B37940K5331J060		2009-06-26	2010-06-30	2010-12-31
B37940K5331J070		2009-06-26	2010-06-30	2010-12-31
B37940K5331J001		2009-06-26	2010-06-30	2010-12-31
B37940K5391J060		2009-06-26	2010-06-30	2010-12-31
B37940K5391J070		2009-06-26	2010-06-30	2010-12-31
B37940K5391J001		2009-06-26	2010-06-30	2010-12-31
B37940K5471J060		2009-06-26	2010-06-30	2010-12-31
B37940K5471J070		2009-06-26	2010-06-30	2010-12-31
B37940K5471J001		2009-06-26	2010-06-30	2010-12-31
B37940K5561J060		2009-06-26	2010-06-30	2010-12-31
B37940K5561J070		2009-06-26	2010-06-30	2010-12-31
B37930K5220J001		2009-06-26	2010-06-30	2010-12-31
B37930K5270J001		2009-06-26	2010-06-30	2010-12-31
B37930K5330J001		2009-06-26	2010-06-30	2010-12-31
B37930K5390J001		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37930K5470J001		2009-06-26	2010-06-30	2010-12-31
B37949K5332J062		2009-06-26	2010-06-30	2010-12-31
B37949K5332J072		2009-06-26	2010-06-30	2010-12-31
B37949K5472J062		2009-06-26	2010-06-30	2010-12-31
B37949K5472J072		2009-06-26	2010-06-30	2010-12-31
B37949K5682J062		2009-06-26	2010-06-30	2010-12-31
B37930K5560J001		2009-06-26	2010-06-30	2010-12-31
B37930K5680J001		2009-06-26	2010-06-30	2010-12-31
B37930K5820J001		2009-06-26	2010-06-30	2010-12-31
B37930K5101J001		2009-06-26	2010-06-30	2010-12-31
B37930K5121J001		2009-06-26	2010-06-30	2010-12-31
B37949K5682J072		2009-06-26	2010-06-30	2010-12-31
B37949K5103J062		2009-06-26	2010-06-30	2010-12-31
B37949K5103J072		2009-06-26	2010-06-30	2010-12-31
B37930K5151J001		2009-06-26	2010-06-30	2010-12-31
B37930K5181J001		2009-06-26	2010-06-30	2010-12-31
B37930K5221J001		2009-06-26	2010-06-30	2010-12-31
B37930K5271J001		2009-06-26	2010-06-30	2010-12-31
B37930K5331J001		2009-06-26	2010-06-30	2010-12-31
B37930K5391J001		2009-06-26	2010-06-30	2010-12-31
B37930K5471J001		2009-06-26	2010-06-30	2010-12-31
B37940K5561J001		2009-06-26	2010-06-30	2010-12-31
B37940K5681J060		2009-06-26	2010-06-30	2010-12-31
B37940K5681J070		2009-06-26	2010-06-30	2010-12-31
B37940K5681J001		2009-06-26	2010-06-30	2010-12-31
B37940K5821J060		2009-06-26	2010-06-30	2010-12-31
B37940K5821J070		2009-06-26	2010-06-30	2010-12-31
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B37940K5102J060		2009-06-26	2010-06-30	2010-12-31
B37940K5102J070		2009-06-26	2010-06-30	2010-12-31
B37940K5102J001		2009-06-26	2010-06-30	2010-12-31
B37940K5122J060		2009-06-26	2010-06-30	2010-12-31
B37940K5122J070		2009-06-26	2010-06-30	2010-12-31
B37940K5152J060		2009-06-26	2010-06-30	2010-12-31
B37940K5152J070		2009-06-26	2010-06-30	2010-12-31
B37940K5182J062		2009-06-26	2010-06-30	2010-12-31
B37940K5182J072		2009-06-26	2010-06-30	2010-12-31
B37940K5222J062		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37940K5222J072		2009-06-26	2010-06-30	2010-12-31
B37940K1100J060		2009-06-26	2010-06-30	2010-12-31
B37940K1100J070		2009-06-26	2010-06-30	2010-12-31
B37940K1120J060		2009-06-26	2010-06-30	2010-12-31
B37940K1120J070		2009-06-26	2010-06-30	2010-12-31
B37940K1150J060		2009-06-26	2010-06-30	2010-12-31
B37940K1150J070		2009-06-26	2010-06-30	2010-12-31
B37940K1180J060		2009-06-26	2010-06-30	2010-12-31
B37920K5030C360		2009-06-26	2010-06-30	2010-12-31
B37920K5030C370		2009-06-26	2010-06-30	2010-12-31
B37920K5030C960		2009-06-26	2010-06-30	2010-12-31
B37920K5030C970		2009-06-26	2010-06-30	2010-12-31
B37940K1180J070		2009-06-26	2010-06-30	2010-12-31
B37940K1220J060		2009-06-26	2010-06-30	2010-12-31
B37940K1220J070		2009-06-26	2010-06-30	2010-12-31
B37940K1270J060		2009-06-26	2010-06-30	2010-12-31
B37940K1270J070		2009-06-26	2010-06-30	2010-12-31
B37920K5040C760		2009-06-26	2010-06-30	2010-12-31
B37920K5040C770		2009-06-26	2010-06-30	2010-12-31
B37920K5050D660		2009-06-26	2010-06-30	2010-12-31
B37920K5050D670		2009-06-26	2010-06-30	2010-12-31
B37920K5060D860		2009-06-26	2010-06-30	2010-12-31
B37940K1330J060		2009-06-26	2010-06-30	2010-12-31
B37940K1330J070		2009-06-26	2010-06-30	2010-12-31
B37871K5102J060		2009-06-26	2010-06-30	2010-12-31
B37940K1390J060		2009-06-26	2010-06-30	2010-12-31
B37871K5102J070		2009-06-26	2010-06-30	2010-12-31
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B37871K5122J060		2009-06-26	2010-06-30	2010-12-31
B37940K1470J060		2009-06-26	2010-06-30	2010-12-31
B37871K5122J070		2009-06-26	2010-06-30	2010-12-31
B37920K5060D870		2009-06-26	2010-06-30	2010-12-31
B37871K5152J060		2009-06-26	2010-06-30	2010-12-31
B37920K5080D260		2009-06-26	2010-06-30	2010-12-31
B37920K5080D270		2009-06-26	2010-06-30	2010-12-31
B37920K5100J060		2009-06-26	2010-06-30	2010-12-31
B37920K5100J070		2009-06-26	2010-06-30	2010-12-31
B37940K1470J070		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37940K1560J060		2009-06-26	2010-06-30	2010-12-31
B37871K5152J070		2009-06-26	2010-06-30	2010-12-31
B37940K1560J070		2009-06-26	2010-06-30	2010-12-31
B37871K5182J060		2009-06-26	2010-06-30	2010-12-31
B37940K1680J060		2009-06-26	2010-06-30	2010-12-31
B37871K5182J070		2009-06-26	2010-06-30	2010-12-31
B37940K1680J070		2009-06-26	2010-06-30	2010-12-31
B37871K5222J060		2009-06-26	2010-06-30	2010-12-31
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B37940K1820J060		2009-06-26	2010-06-30	2010-12-31
B37940K1820J070		2009-06-26	2010-06-30	2010-12-31
B37871K5272J060		2009-06-26	2010-06-30	2010-12-31
B37940K1101J060		2009-06-26	2010-06-30	2010-12-31
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B37940K1101J070		2009-06-26	2010-06-30	2010-12-31
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B37940K1121J060		2009-06-26	2010-06-30	2010-12-31
B37871K5332J070		2009-06-26	2010-06-30	2010-12-31
B37871K5392J060		2009-06-26	2010-06-30	2010-12-31
B37940K1121J070		2009-06-26	2010-06-30	2010-12-31
B37940K1151J060		2009-06-26	2010-06-30	2010-12-31
B37871K5392J070		2009-06-26	2010-06-30	2010-12-31
B37940K1151J070		2009-06-26	2010-06-30	2010-12-31
B37871K5472J062		2009-06-26	2010-06-30	2010-12-31
B37940K1181J060		2009-06-26	2010-06-30	2010-12-31
B37871K5472J072		2009-06-26	2010-06-30	2010-12-31
B37940K1181J070		2009-06-26	2010-06-30	2010-12-31
B37871K5562J062		2009-06-26	2010-06-30	2010-12-31
B37871K5562J072		2009-06-26	2010-06-30	2010-12-31
B37871K1330J060		2009-06-26	2010-06-30	2010-12-31
B37871K1330J070		2009-06-26	2010-06-30	2010-12-31
B37871K1470J060		2009-06-26	2010-06-30	2010-12-31
B37871K1470J070		2009-06-26	2010-06-30	2010-12-31
B37871K1680J060		2009-06-26	2010-06-30	2010-12-31
B37871K1680J070		2009-06-26	2010-06-30	2010-12-31
B37871K1101J060		2009-06-26	2010-06-30	2010-12-31
B37871K1101J070		2009-06-26	2010-06-30	2010-12-31
B37871K1151J060		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37871K1151J070		2009-06-26	2010-06-30	2010-12-31
B37871K1221J060		2009-06-26	2010-06-30	2010-12-31
B37871K1221J070		2009-06-26	2010-06-30	2010-12-31
B37871K1331J060		2009-06-26	2010-06-30	2010-12-31
B37871K1331J070		2009-06-26	2010-06-30	2010-12-31
B37871K1471J060		2009-06-26	2010-06-30	2010-12-31
B37871K1471J070		2009-06-26	2010-06-30	2010-12-31
B37871K1681J060		2009-06-26	2010-06-30	2010-12-31
B37871K1681J070		2009-06-26	2010-06-30	2010-12-31
B37871K1102J060		2009-06-26	2010-06-30	2010-12-31
B37871K1102J070		2009-06-26	2010-06-30	2010-12-31
B37871K1152J060		2009-06-26	2010-06-30	2010-12-31
B37871K1152J070		2009-06-26	2010-06-30	2010-12-31
B37871K1222J062		2009-06-26	2010-06-30	2010-12-31
B37871K1222J072		2009-06-26	2010-06-30	2010-12-31
B37871K5100J060		2009-06-26	2010-06-30	2010-12-31
B37871K5100J070		2009-06-26	2010-06-30	2010-12-31
B37871K5120J060		2009-06-26	2010-06-30	2010-12-31
B37871K5120J070		2009-06-26	2010-06-30	2010-12-31
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B37871K5470J070		2009-06-26	2010-06-30	2010-12-31
B37871K5560J060		2009-06-26	2010-06-30	2010-12-31
B37871K5560J070		2009-06-26	2010-06-30	2010-12-31
B37871K5680J060		2009-06-26	2010-06-30	2010-12-31
B37871K5680J070		2009-06-26	2010-06-30	2010-12-31
B37871K5820J060		2009-06-26	2010-06-30	2010-12-31
B37871K5820J070		2009-06-26	2010-06-30	2010-12-31
B37871K5101J060		2009-06-26	2010-06-30	2010-12-31
B37871K5101J070		2009-06-26	2010-06-30	2010-12-31
B37871K5121J060		2009-06-26	2010-06-30	2010-12-31
B37871K5121J070		2009-06-26	2010-06-30	2010-12-31
B37871K5151J060		2009-06-26	2010-06-30	2010-12-31
B37871K5151J070		2009-06-26	2010-06-30	2010-12-31
B37871K5181J060		2009-06-26	2010-06-30	2010-12-31
B37871K5181J070		2009-06-26	2010-06-30	2010-12-31
B37871K5221J060		2009-06-26	2010-06-30	2010-12-31
B37871K5221J070		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37871K5271J060		2009-06-26	2010-06-30	2010-12-31
B37871K5271J070		2009-06-26	2010-06-30	2010-12-31
B37871K5331J060		2009-06-26	2010-06-30	2010-12-31
B37871K5331J070		2009-06-26	2010-06-30	2010-12-31
B37871K5391J060		2009-06-26	2010-06-30	2010-12-31
B37871K5391J070		2009-06-26	2010-06-30	2010-12-31
B37871K5471J060		2009-06-26	2010-06-30	2010-12-31
B37871K5471J070		2009-06-26	2010-06-30	2010-12-31
B37871K5561J060		2009-06-26	2010-06-30	2010-12-31
B37871K5561J070		2009-06-26	2010-06-30	2010-12-31
B37871K5681J060		2009-06-26	2010-06-30	2010-12-31
B37871K5681J070		2009-06-26	2010-06-30	2010-12-31
B37871K5821J060		2009-06-26	2010-06-30	2010-12-31
B37871K5821J070		2009-06-26	2010-06-30	2010-12-31
B37920K5120J060		2009-06-26	2010-06-30	2010-12-31
B37920K5120J070		2009-06-26	2010-06-30	2010-12-31
B37920K5150J060		2009-06-26	2010-06-30	2010-12-31
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B37920K5470J060		2009-06-26	2010-06-30	2010-12-31
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B37940K1271J060		2009-06-26	2010-06-30	2010-12-31
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B37940K1331J060		2009-06-26	2010-06-30	2010-12-31
B37920K5470J070		2009-06-26	2010-06-30	2010-12-31
B37920K5560J060		2009-06-26	2010-06-30	2010-12-31
B37920K5560J070		2009-06-26	2010-06-30	2010-12-31
B37920K5680J060		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37920K5680J070		2009-06-26	2010-06-30	2010-12-31
B37940K1331J070		2009-06-26	2010-06-30	2010-12-31
B37940K1391J060		2009-06-26	2010-06-30	2010-12-31
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B37940K1471J060		2009-06-26	2010-06-30	2010-12-31
B37940K1471J070		2009-06-26	2010-06-30	2010-12-31
B37920K5820J060		2009-06-26	2010-06-30	2010-12-31
B37920K5820J070		2009-06-26	2010-06-30	2010-12-31
B37920K5101J060		2009-06-26	2010-06-30	2010-12-31
B37920K5101J070		2009-06-26	2010-06-30	2010-12-31
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B37940K1561J060		2009-06-26	2010-06-30	2010-12-31
B37940K1561J070		2009-06-26	2010-06-30	2010-12-31
B37940K1681J060		2009-06-26	2010-06-30	2010-12-31
B37940K1681J070		2009-06-26	2010-06-30	2010-12-31
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B37930K5010C860		2009-06-26	2010-06-30	2010-12-31
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B37930K5020C270		2009-06-26	2010-06-30	2010-12-31
B37930K5020C760		2009-06-26	2010-06-30	2010-12-31
B37930K5020C770		2009-06-26	2010-06-30	2010-12-31
B37940K2151J060		2009-06-26	2010-06-30	2010-12-31
B37940K2151J070		2009-06-26	2010-06-30	2010-12-31
B37940K2221J060		2009-06-26	2010-06-30	2010-12-31
B37940K2221J070		2009-06-26	2010-06-30	2010-12-31
B37940K5010C060		2009-06-26	2010-06-30	2010-12-31
B37930K5030C360		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37930K5030C370		2009-06-26	2010-06-30	2010-12-31
B37930K5030C960		2009-06-26	2010-06-30	2010-12-31
B37930K5030C970		2009-06-26	2010-06-30	2010-12-31
B37930K5040C760		2009-06-26	2010-06-30	2010-12-31
B37940K5010C070		2009-06-26	2010-06-30	2010-12-31
B37940K5010C001		2009-06-26	2010-06-30	2010-12-31
B37940K5010C260		2009-06-26	2010-06-30	2010-12-31
B37940K5010C270		2009-06-26	2010-06-30	2010-12-31
B37940K5010C201		2009-06-26	2010-06-30	2010-12-31
B37930K5040C770		2009-06-26	2010-06-30	2010-12-31
B37930K5050D660		2009-06-26	2010-06-30	2010-12-31
B37930K5050D670		2009-06-26	2010-06-30	2010-12-31
B37930K5060D860		2009-06-26	2010-06-30	2010-12-31
B37930K5060D870		2009-06-26	2010-06-30	2010-12-31
B37940K5010C560		2009-06-26	2010-06-30	2010-12-31
B37940K5010C570		2009-06-26	2010-06-30	2010-12-31
B37871K5180J060		2009-06-26	2010-06-30	2010-12-31
B37940K5010C501		2009-06-26	2010-06-30	2010-12-31
B37871K5180J070		2009-06-26	2010-06-30	2010-12-31
B37940K5010C860		2009-06-26	2010-06-30	2010-12-31
B37871K5220J060		2009-06-26	2010-06-30	2010-12-31
B37940K5010C870		2009-06-26	2010-06-30	2010-12-31
B37871K5220J070		2009-06-26	2010-06-30	2010-12-31
B37871K5270J060		2009-06-26	2010-06-30	2010-12-31
B37930K5080D260		2009-06-26	2010-06-30	2010-12-31
B37930K5080D270		2009-06-26	2010-06-30	2010-12-31
B37930K5100J060		2009-06-26	2010-06-30	2010-12-31
B37930K5100J070		2009-06-26	2010-06-30	2010-12-31
B37930K5120J060		2009-06-26	2010-06-30	2010-12-31
B37940K5010C801		2009-06-26	2010-06-30	2010-12-31
B37940K5020C260		2009-06-26	2010-06-30	2010-12-31
B37871K5270J070		2009-06-26	2010-06-30	2010-12-31
B37871K5330J060		2009-06-26	2010-06-30	2010-12-31
B37871K5330J070		2009-06-26	2010-06-30	2010-12-31
B37871K5390J060		2009-06-26	2010-06-30	2010-12-31
B37871K5390J070		2009-06-26	2010-06-30	2010-12-31
B37930K5120J070		2009-06-26	2010-06-30	2010-12-31
B37930K5150J060		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37930K5150J070		2009-06-26	2010-06-30	2010-12-31
B37930K5180J060		2009-06-26	2010-06-30	2010-12-31
B37930K5180J070		2009-06-26	2010-06-30	2010-12-31
B37871K5470J060		2009-06-26	2010-06-30	2010-12-31
B37940K5020C270		2009-06-26	2010-06-30	2010-12-31
B37940K5020C201		2009-06-26	2010-06-30	2010-12-31
B37940K5020C760		2009-06-26	2010-06-30	2010-12-31
B37940K5020C770		2009-06-26	2010-06-30	2010-12-31
B37940K5020C701		2009-06-26	2010-06-30	2010-12-31
B37940K5030C360		2009-06-26	2010-06-30	2010-12-31
B37940K5030C370		2009-06-26	2010-06-30	2010-12-31
B37940K5030C301		2009-06-26	2010-06-30	2010-12-31
B37940K5030C960		2009-06-26	2010-06-30	2010-12-31
B37940K5030C970		2009-06-26	2010-06-30	2010-12-31
B37940K5030C901		2009-06-26	2010-06-30	2010-12-31
B37940K5040C760		2009-06-26	2010-06-30	2010-12-31
B37940K5040C770		2009-06-26	2010-06-30	2010-12-31
B37940K5040C701		2009-06-26	2010-06-30	2010-12-31
B37940K5050D660		2009-06-26	2010-06-30	2010-12-31
B37940K5050D670		2009-06-26	2010-06-30	2010-12-31
B37940K5050D601		2009-06-26	2010-06-30	2010-12-31
B37940K5060D860		2009-06-26	2010-06-30	2010-12-31
B37940K5060D870		2009-06-26	2010-06-30	2010-12-31
B37940K5060D801		2009-06-26	2010-06-30	2010-12-31
B37940K5080D260		2009-06-26	2010-06-30	2010-12-31
B37940K5080D270		2009-06-26	2010-06-30	2010-12-31
B37940K5080D201		2009-06-26	2010-06-30	2010-12-31
B37940K5100J060		2009-06-26	2010-06-30	2010-12-31
B37940K5100J070		2009-06-26	2010-06-30	2010-12-31
B37940K5100J001		2009-06-26	2010-06-30	2010-12-31
B37940K5120J060		2009-06-26	2010-06-30	2010-12-31
B37940K5120J070		2009-06-26	2010-06-30	2010-12-31
B37940K5120J001		2009-06-26	2010-06-30	2010-12-31
B37940K5150J060		2009-06-26	2010-06-30	2010-12-31
B37940K5150J070		2009-06-26	2010-06-30	2010-12-31
B37940K5150J001		2009-06-26	2010-06-30	2010-12-31
B37940K5180J060		2009-06-26	2010-06-30	2010-12-31
B37940K5180J070		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37940K5180J001		2009-06-26	2010-06-30	2010-12-31
B37940K5220J060		2009-06-26	2010-06-30	2010-12-31
B37940K5220J070		2009-06-26	2010-06-30	2010-12-31
B37940K5220J001		2009-06-26	2010-06-30	2010-12-31
B37930K5220J060		2009-06-26	2010-06-30	2010-12-31
B37930K5220J070		2009-06-26	2010-06-30	2010-12-31
B37930K5270J060		2009-06-26	2010-06-30	2010-12-31
B37930K5270J070		2009-06-26	2010-06-30	2010-12-31
B37930K5330J060		2009-06-26	2010-06-30	2010-12-31
B37930K5330J070		2009-06-26	2010-06-30	2010-12-31
B37930K5390J060		2009-06-26	2010-06-30	2010-12-31
B37930K5390J070		2009-06-26	2010-06-30	2010-12-31
B37930K5470J060		2009-06-26	2010-06-30	2010-12-31
B37930K5470J070		2009-06-26	2010-06-30	2010-12-31
B37930K5560J060		2009-06-26	2010-06-30	2010-12-31
B37930K5560J070		2009-06-26	2010-06-30	2010-12-31
B37930K5680J060		2009-06-26	2010-06-30	2010-12-31
B37930K5680J070		2009-06-26	2010-06-30	2010-12-31
B37930K5820J060		2009-06-26	2010-06-30	2010-12-31
B37930K5820J070		2009-06-26	2010-06-30	2010-12-31
B37930K5101J060		2009-06-26	2010-06-30	2010-12-31
B37930K5101J070		2009-06-26	2010-06-30	2010-12-31
B37930K5121J060		2009-06-26	2010-06-30	2010-12-31
B37930K5121J070		2009-06-26	2010-06-30	2010-12-31
B37930K5151J060		2009-06-26	2010-06-30	2010-12-31
B37930K5151J070		2009-06-26	2010-06-30	2010-12-31
B37930K5181J060		2009-06-26	2010-06-30	2010-12-31
B37930K5181J070		2009-06-26	2010-06-30	2010-12-31
B37930K5221J060		2009-06-26	2010-06-30	2010-12-31
B37930K5221J070		2009-06-26	2010-06-30	2010-12-31
B37930K5271J060		2009-06-26	2010-06-30	2010-12-31
B37930K5271J070		2009-06-26	2010-06-30	2010-12-31
B37930K5331J060		2009-06-26	2010-06-30	2010-12-31
B37930K5331J070		2009-06-26	2010-06-30	2010-12-31
B37930K5391J060		2009-06-26	2010-06-30	2010-12-31
B37930K5391J070		2009-06-26	2010-06-30	2010-12-31
B37930K5471J060		2009-06-26	2010-06-30	2010-12-31
B37930K5471J070		2009-06-26	2010-06-30	2010-12-31

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Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B37930K5010C001		2009-06-26	2010-06-30	2010-12-31
B37930K5010C201		2009-06-26	2010-06-30	2010-12-31
B37930K5010C501		2009-06-26	2010-06-30	2010-12-31
B37930K5010C801		2009-06-26	2010-06-30	2010-12-31
B37930K5020C201		2009-06-26	2010-06-30	2010-12-31
B37930K5020C701		2009-06-26	2010-06-30	2010-12-31
B37940K5270J060		2009-06-26	2010-06-30	2010-12-31
B37940K5270J070		2009-06-26	2010-06-30	2010-12-31
B37940K5270J001		2009-06-26	2010-06-30	2010-12-31
B37940K5330J060		2009-06-26	2010-06-30	2010-12-31
B37940K5330J070		2009-06-26	2010-06-30	2010-12-31
B37930K5030C301		2009-06-26	2010-06-30	2010-12-31
B37930K5030C901		2009-06-26	2010-06-30	2010-12-31
B37930K5040C701		2009-06-26	2010-06-30	2010-12-31
B37930K5050D601		2009-06-26	2010-06-30	2010-12-31
B37930K5060D801		2009-06-26	2010-06-30	2010-12-31
B37940K5330J001		2009-06-26	2010-06-30	2010-12-31
B37940K5390J060		2009-06-26	2010-06-30	2010-12-31
B37940K5390J070		2009-06-26	2010-06-30	2010-12-31
B37940K5390J001		2009-06-26	2010-06-30	2010-12-31
B37940K5470J060		2009-06-26	2010-06-30	2010-12-31
B37930K5080D201		2009-06-26	2010-06-30	2010-12-31
B37930K5100J001		2009-06-26	2010-06-30	2010-12-31
B37930K5120J001		2009-06-26	2010-06-30	2010-12-31
B37930K5150J001		2009-06-26	2010-06-30	2010-12-31
B37930K5180J001		2009-06-26	2010-06-30	2010-12-31
B37940K5470J070		2009-06-26	2010-06-30	2010-12-31
B37940K5470J001		2009-06-26	2010-06-30	2010-12-31
B37940K5560J060		2009-06-26	2010-06-30	2010-12-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

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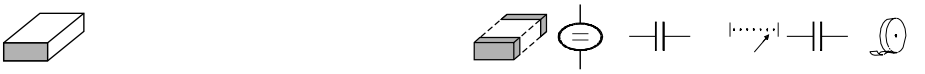
Ordering code system



B37940	K	5	010	C	5	60

Type and size
Chip size (inch/mm) = Temperature characteristic C0G:
0402/1005 ≙ B37920
0603/1608 ≙ B37930
0805/2012 ≙ B37940
1206/3216 ≙ B37871
1210/3225 ≙ B37949

Termination
Standard:
K ≙ nickel barrier for all case sizes
On request:
J ≙ silver-palladium for conductive adhesion for all case sizes

Rated voltage
5 (Code) ≙ 50 VDC
1 (Code) ≙ 100 VDC
2 (Code) ≙ 200 VDC

Capacitance, coded (example)
010 ≙ $1 \cdot 10^0$ pF = 1 pF
100 ≙ $10 \cdot 10^0$ pF = 10 pF
221 ≙ $22 \cdot 10^1$ pF = 220 pF

Capacitance tolerance
C_R < 10 pF:
B ≙ ±0.1 pF
C ≙ ±0.25 pF (standard for capacitance values ≤ 4.7 pF)
D ≙ ±0.5 pF (standard for capacitance values ≤ 8.2 pF)
C_R ≥ 10 pF:
F ≙ ±1%
G ≙ ±2%
J ≙ ±5% (standard)
K ≙ ±10%

Decimal place for cap. values < 10 pF, otherwise 0

Packaging
60 ≙ cardboard tape, 180-mm reel
62 ≙ blister tape, 180-mm reel
70 ≙ cardboard tape, 330-mm reel
72 ≙ blister tape, 330-mm reel
01 ≙ bulk case

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Features

- Good thermal stability
- High insulation resistance
- Low dissipation factor
- Low inductance
- Based on AEC-Q200 Rev-C

Applications

- Resonant circuits
- Filter circuits
- Timing elements
- Coupling and filtering, particularly in RF circuits

Termination

- Nickel barrier terminations (Ni) for lead-free soldering
- For conductive adhesion: Silver-palladium terminations (AgPd) on request

Options

- Alternative capacitance values and tolerances available on request

Delivery mode

- Cardboard and blister tape (blister tape for chip thickness ≥1.2 ±0.1 mm and case size 1210), 180-mm and 330-mm reel available
- Bulk case for case sizes 0402, 0603 (50 V) and 0805 (50 V)

Electrical data

Temperature characteristic			C0G	
Climatic category	(IEC 60068-1)		55/125/56	
Standard			EIA	
Dielectric			Class 1	
Rated voltage		V_R	50, 100, 200	VDC
Test voltage		V_{test}	$2.5 \cdot V_R$/5 s	VDC
Capacitance range		C_R	1 pF ... 10 nF (E6/E12)	
Temperature coefficient			$0 \pm 30 \cdot 10^{-6}$/K	
Dissipation factor	(limit value)	tan δ	$< 1.0 \cdot 10^{-3}$	
Insulation resistance[1)]	(at +25 °C)	R_{ins}	$> 10^5$	MΩ
Insulation resistance[1)]	(at +125 °C)	R_{ins}	$> 10^4$	MΩ
Time constant[1)]	(at +25 °C)	τ	> 1000	s
Time constant[1)]	(at +125 °C)	τ	> 100	s
Operating temperature range		T_{op}	−55 ... +125	°C
Ageing			none	

1) For C_R >10 nF the time constant $\tau = C \cdot R_{ins}$ is given.

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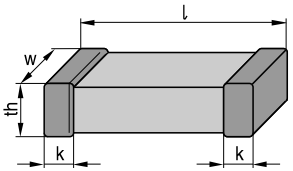
Capacitance tolerances

	$C_R \leq 4.7$ pF			5.6 pF $\leq C_R \leq$ 8.2 pF		
Code letter	B	C (standard)	D	B	C	D (standard)
Tolerance	±0.1 pF (on request)	±0.25 pF	±0.5 pF	±0.1 pF (on request)	±0.25 pF (on request)	±0.5 pF

	$C_R \geq 10$ pF			
Code letter	F	G	J (standard)	K
Tolerance	±1% (on request for 50 V and 100 V; not available for 200 V)	±2% (on request for 50 V and 100 V; not available for 200 V)	±5%	±10%

Dimensional drawing



KKE0329-N

Dimensions (mm)

Case size	(inch)	0402	0603	0805	1206	1210
	(mm)	1005	1608	2012	3216	3225
l		1.00 ±0.10	1.60 ±0.15	2.00 ±0.20	3.20 ±0.20	3.20 ±0.30
w		0.50 ±0.05	0.80 ±0.10	1.25 ±0.15	1.60 ±0.15	2.50 ±0.30
th		0.50 ±0.05	0.80 ±0.10	1.30 max.	1.30 max.	1.70 max.
k		0.10 −0.40	0.10 −0.40	0.13 −0.75	0.25 −0.75	0.25 −0.75

Tolerances to CECC 32101-801

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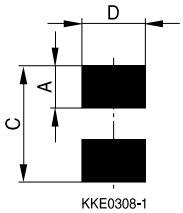
Recommended solder pad



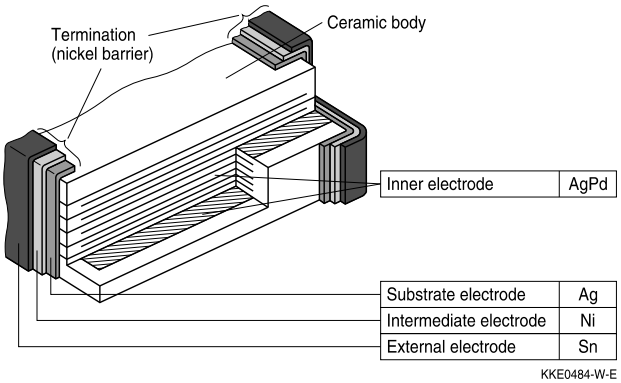
Recommended dimensions (mm) for reflow soldering

Case size	(inch/mm)	Type	A	C	D
	0402/1005	single chip	0.35 ... 0.45	1.00 ... 1.40	0.40 ... 0.60
	0603/1608	single chip	0.60 ... 0.70	1.80 ... 2.20	0.60 ... 0.80
	0805/2012	single chip	0.60 ... 0.70	2.20 ... 2.60	0.80 ... 1.10
	1206/3216	single chip	0.80 ... 0.90	3.80 ... 4.32	1.00 ... 1.40
	1210/3225	single chip	1.00 ... 1.20	4.00 ... 4.80	1.80 ... 2.30

Recommended dimensions (mm) for wave soldering

Case size	(inch/mm)	Type	A	C	D
	0603/1608	single chip	0.80 ... 0.90	2.20 ... 2.80	0.60 ... 0.80
	0805/2012	single chip	0.90 ... 1.00	2.80 ... 3.20	0.80 ... 1.10
	1206/3216	single chip	1.00 ... 1.10	4.20 ... 4.80	1.00 ... 1.40

Termination



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Product range chip capacitors, C0G

Size **inch (l x w)** mm (l x w)	**0402** 1005	**0603** 1608	**0805** 2012			**1206** 3216		**1210** 3225
Type	B37920	B37930	B37940			B37871		B37949
C_R \ V_R (VDC)	50	50	50	100	200	50	100	50
1.0 pF								
1.2 pF								
1.5 pF								
1.8 pF								
2.2 pF								
2.7 pF								
3.3 pF								
3.9 pF								
4.7 pF								
5.6 pF								
6.8 pF								
8.2 pF								
10 pF								
12 pF								
15 pF								
18 pF								
22 pF								
27 pF								
33 pF								
39 pF								
47 pF								
56 pF								
68 pF								
82 pF								
100 pF								
120 pF								
150 pF								
180 pF								
220 pF								
270 pF								
330 pF								
390 pF								

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Product range chip capacitors, C0G

Size **inch (l x w)** mm (l x w)	**0402** 1005	**0603** 1608	**0805** 2012			**1206** 3216		**1210** 3225
Type	B37920	B37930	B37940			B37871		B37949
$C_R \setminus V_R$ (VDC)	50	50	50	100	200	50	100	50
470 pF								
560 pF								
680 pF								
820 pF								
1.0 nF								
1.2 nF								
1.5 nF								
1.8 nF								
2.2 nF								
2.7 nF								
3.3 nF								
3.9 nF								
4.7 nF								
5.6 nF								
6.8 nF								
10 nF								

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Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 0402, 50 VDC

C_R	Ordering code	Chip thickness mm	Cardboard tape, ∅180-mm reel ** ≙ 60 pcs./reel	Cardboard tape, ∅330-mm reel ** ≙ 70 pcs./reel
3.3 pF	B37920K5030C3**	0.5 ±0.05	10000	50000
3.9 pF	B37920K5030C9**	0.5 ±0.05	10000	50000
4.7 pF	B37920K5040C7**	0.5 ±0.05	10000	50000
5.6 pF	B37920K5050D6**	0.5 ±0.05	10000	50000
6.8 pF	B37920K5060D8**	0.5 ±0.05	10000	50000
8.2 pF	B37920K5080D2**	0.5 ±0.05	10000	50000
10 pF	B37920K5100J0**	0.5 ±0.05	10000	50000
12 pF	B37920K5120J0**	0.5 ±0.05	10000	50000
15 pF	B37920K5150J0**	0.5 ±0.05	10000	50000
18 pF	B37920K5180J0**	0.5 ±0.05	10000	50000
22 pF	B37920K5220J0**	0.5 ±0.05	10000	50000
27 pF	B37920K5270J0**	0.5 ±0.05	10000	50000
33 pF	B37920K5330J0**	0.5 ±0.05	10000	50000
39 pF	B37920K5390J0**	0.5 ±0.05	10000	50000
47 pF	B37920K5470J0**	0.5 ±0.05	10000	50000
56 pF	B37920K5560J0**	0.5 ±0.05	10000	50000
68 pF	B37920K5680J0**	0.5 ±0.05	10000	50000
82 pF	B37920K5820J0**	0.5 ±0.05	10000	50000
100 pF	B37920K5101J0**	0.5 ±0.05	10000	50000

Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 0603, 50 VDC

C_R	Ordering code	Chip thickness mm	Cardboard tape, ∅180-mm reel ** ≙ 60 pcs./reel	Cardboard tape, ∅330-mm reel ** ≙ 70 pcs./reel	Bulk case ** ≙ 01 pcs.
1.0 pF	B37930K5010C0**	0.8 ±0.1	4000	16000	15000
1.2 pF	B37930K5010C2**	0.8 ±0.1	4000	16000	15000
1.5 pF	B37930K5010C5**	0.8 ±0.1	4000	16000	15000
1.8 pF	B37930K5010C8**	0.8 ±0.1	4000	16000	15000
2.2 pF	B37930K5020C2**	0.8 ±0.1	4000	16000	15000

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Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 0603, 50 VDC

C_R	Ordering code	Chip thickness mm	Cardboard tape, ∅180-mm reel ** ≙ 60 pcs./reel	Cardboard tape, ∅330-mm reel ** ≙ 70 pcs./reel	Bulk case ** ≙ 01 pcs.
2.7 pF	B37930K5020C7**	0.8 ±0.1	4000	16000	15000
3.3 pF	B37930K5030C3**	0.8 ±0.1	4000	16000	15000
3.9 pF	B37930K5030C9**	0.8 ±0.1	4000	16000	15000
4.7 pF	B37930K5040C7**	0.8 ±0.1	4000	16000	15000
5.6 pF	B37930K5050D6**	0.8 ±0.1	4000	16000	15000
6.8 pF	B37930K5060D8**	0.8 ±0.1	4000	16000	15000
8.2 pF	B37930K5080D2**	0.8 ±0.1	4000	16000	15000
10 pF	B37930K5100J0**	0.8 ±0.1	4000	16000	15000
12 pF	B37930K5120J0**	0.8 ±0.1	4000	16000	15000
15 pF	B37930K5150J0**	0.8 ±0.1	4000	16000	15000
18 pF	B37930K5180J0**	0.8 ±0.1	4000	16000	15000
22 pF	B37930K5220J0**	0.8 ±0.1	4000	16000	15000
27 pF	B37930K5270J0**	0.8 ±0.1	4000	16000	15000
33 pF	B37930K5330J0**	0.8 ±0.1	4000	16000	15000
39 pF	B37930K5390J0**	0.8 ±0.1	4000	16000	15000
47 pF	B37930K5470J0**	0.8 ±0.1	4000	16000	15000
56 pF	B37930K5560J0**	0.8 ±0.1	4000	16000	15000
68 pF	B37930K5680J0**	0.8 ±0.1	4000	16000	15000
82 pF	B37930K5820J0**	0.8 ±0.1	4000	16000	15000
100 pF	B37930K5101J0**	0.8 ±0.1	4000	16000	15000
120 pF	B37930K5121J0**	0.8 ±0.1	4000	16000	15000
150 pF	B37930K5151J0**	0.8 ±0.1	4000	16000	15000
180 pF	B37930K5181J0**	0.8 ±0.1	4000	16000	15000
220 pF	B37930K5221J0**	0.8 ±0.1	4000	16000	15000
270 pF	B37930K5271J0**	0.8 ±0.1	4000	16000	15000
330 pF	B37930K5331J0**	0.8 ±0.1	4000	16000	15000
390 pF	B37930K5391J0**	0.8 ±0.1	4000	16000	15000
470 pF	B37930K5471J0**	0.8 ±0.1	4000	16000	15000

SMD

Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 0805, 50 VDC

C_R	Ordering code	Chip thickness mm	Cardboard tape, ∅180-mm reel ** ≙ 60 pcs./reel	Cardboard tape, ∅330-mm reel ** ≙ 70 pcs./reel	Blister tape, ∅180-mm reel ** ≙ 62 pcs./reel	Blister tape, ∅330-mm reel ** ≙ 72 pcs./reel	Bulk case ** ≙ 01 pcs.
1.0 pF	B37940K5010C0**	0.6 ±0.1	5000	20000			10000
1.2 pF	B37940K5010C2**	0.6 ±0.1	5000	20000			10000
1.5 pF	B37940K5010C5**	0.6 ±0.1	5000	20000			10000
1.8 pF	B37940K5010C8**	0.6 ±0.1	5000	20000			10000
2.2 pF	B37940K5020C2**	0.6 ±0.1	5000	20000			10000
2.7 pF	B37940K5020C7**	0.6 ±0.1	5000	20000			10000
3.3 pF	B37940K5030C3**	0.6 ±0.1	5000	20000			10000
3.9 pF	B37940K5030C9**	0.6 ±0.1	5000	20000			10000
4.7 pF	B37940K5040C7**	0.6 ±0.1	5000	20000			10000
5.6 pF	B37940K5050D6**	0.6 ±0.1	5000	20000			10000
6.8 pF	B37940K5060D8**	0.6 ±0.1	5000	20000			10000
8.2 pF	B37940K5080D2**	0.6 ±0.1	5000	20000			10000
10 pF	B37940K5100J0**	0.6 ±0.1	5000	20000			10000
12 pF	B37940K5120J0**	0.6 ±0.1	5000	20000			10000
15 pF	B37940K5150J0**	0.6 ±0.1	5000	20000			10000
18 pF	B37940K5180J0**	0.6 ±0.1	5000	20000			10000
22 pF	B37940K5220J0**	0.6 ±0.1	5000	20000			10000
27 pF	B37940K5270J0**	0.6 ±0.1	5000	20000			10000
33 pF	B37940K5330J0**	0.6 ±0.1	5000	20000			10000
39 pF	B37940K5390J0**	0.6 ±0.1	5000	20000			10000
47 pF	B37940K5470J0**	0.6 ±0.1	5000	20000			10000
56 pF	B37940K5560J0**	0.6 ±0.1	5000	20000			10000
68 pF	B37940K5680J0**	0.6 ±0.1	5000	20000			10000
82 pF	B37940K5820J0**	0.6 ±0.1	5000	20000			10000
100 pF	B37940K5101J0**	0.6 ±0.1	5000	20000			10000
120 pF	B37940K5121J0**	0.6 ±0.1	5000	20000			10000
150 pF	B37940K5151J0**	0.6 ±0.1	5000	20000			10000
180 pF	B37940K5181J0**	0.6 ±0.1	5000	20000			10000
220 pF	B37940K5221J0**	0.6 ±0.1	5000	20000			10000
270 pF	B37940K5271J0**	0.6 ±0.1	5000	20000			10000
330 pF	B37940K5331J0**	0.6 ±0.1	5000	20000			10000

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Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 0805, 50 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel	Blister tape, ∅180-mm reel	Blister tape, ∅330-mm reel	Bulk case
			** ≙ 60	** ≙ 70	** ≙ 62	** ≙ 72	** ≙ 01
C_R	Ordering code	mm	pcs./reel	pcs./reel	pcs./reel	pcs./reel	pcs.
390 pF	B37940K5391J0**	0.6 ±0.1	5000	20000			10000
470 pF	B37940K5471J0**	0.6 ±0.1	5000	20000			10000
560 pF	B37940K5561J0**	0.6 ±0.1	5000	20000			10000
680 pF	B37940K5681J0**	0.6 ±0.1	5000	20000			10000
820 pF	B37940K5821J0**	0.6 ±0.1	5000	20000			10000
1.0 nF	B37940K5102J0**	0.6 ±0.1	5000	20000			10000
1.2 nF	B37940K5122J0**	0.8 ±0.1	4000	16000			
1.5 nF	B37940K5152J0**	0.8 ±0.1	4000	16000			
1.8 nF	B37940K5182J0**	1.2 ±0.1			3000	12000	
2.2 nF	B37940K5222J0**	1.2 ±0.1			3000	12000	

Ordering codes and packing for C0G, 100 VDC, nickel barrier terminations

Case size 0805, 100 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel	Blister tape, ∅180-mm reel	Blister tape, ∅330-mm reel
			** ≙ 60	** ≙ 70	** ≙ 62	** ≙ 72
C_R	Ordering code	mm	pcs./reel	pcs./reel	pcs./reel	pcs./reel
10 pF	B37940K1100J0**	0.6 ±0.1	5000	20000		
12 pF	B37940K1120J0**	0.6 ±0.1	5000	20000		
15 pF	B37940K1150J0**	0.6 ±0.1	5000	20000		
18 pF	B37940K1180J0**	0.6 ±0.1	5000	20000		
22 pF	B37940K1220J0**	0.6 ±0.1	5000	20000		
27 pF	B37940K1270J0**	0.6 ±0.1	5000	20000		
33 pF	B37940K1330J0**	0.6 ±0.1	5000	20000		
39 pF	B37940K1390J0**	0.6 ±0.1	5000	20000		
47 pF	B37940K1470J0**	0.6 ±0.1	5000	20000		
56 pF	B37940K1560J0**	0.6 ±0.1	5000	20000		
68 pF	B37940K1680J0**	0.6 ±0.1	5000	20000		

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Ordering codes and packing for C0G, 100 VDC, nickel barrier terminations

Case size 0805, 100 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel	Blister tape, ∅180-mm reel	Blister tape, ∅330-mm reel
			** ≙ 60	** ≙ 70	** ≙ 62	** ≙ 72
C_R	Ordering code	mm	pcs./reel	pcs./reel	pcs./reel	pcs./reel
82 pF	B37940K1820J0**	0.6 ±0.1	5000	20000		
100 pF	B37940K1101J0**	0.6 ±0.1	5000	20000		
120 pF	B37940K1121J0**	0.6 ±0.1	5000	20000		
150 pF	B37940K1151J0**	0.6 ±0.1	5000	20000		
180 pF	B37940K1181J0**	0.6 ±0.1	5000	20000		
220 pF	B37940K1221J0**	0.6 ±0.1	5000	20000		
270 pF	B37940K1271J0**	0.6 ±0.1	5000	20000		
330 pF	B37940K1331J0**	0.6 ±0.1	5000	20000		
390 pF	B37940K1391J0**	0.6 ±0.1	5000	20000		
470 pF	B37940K1471J0**	0.6 ±0.1	5000	20000		
560 pF	B37940K1561J0**	0.8 ±0.1	4000	16000		
680 pF	B37940K1681J0**	0.8 ±0.1	4000	16000		
820 pF	B37940K1821J0**	1.2 ±0.1			3000	12000
1.0 nF	B37940K1102J0**	1.2 ±0.1			3000	12000

Ordering codes and packing for C0G, 200 VDC, nickel barrier terminations

Case size 0805, 200 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel
			** ≙ 60	** ≙ 70
C_R	Ordering code	mm	pcs./reel	pcs./reel
100 pF	B37940K2101J0**	0.6 ±0.1	5000	20000
150 pF	B37940K2151J0**	0.8 ±0.1	4000	16000
220 pF	B37940K2221J0**	0.8 ±0.1	4000	16000

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Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 1206, 50 VDC

C_R	Ordering code	Chip thickness mm	Cardboard tape, ∅180-mm reel ** ≙ 60 pcs./reel	Cardboard tape, ∅330-mm reel ** ≙ 70 pcs./reel	Blister tape, ∅180-mm reel ** ≙ 62 pcs./reel	Blister tape, ∅330-mm reel ** ≙ 72 pcs./reel
10 pF	B37871K5100J0**	0.8 ±0.1	4000	16000		
12 pF	B37871K5120J0**	0.8 ±0.1	4000	16000		
15 pF	B37871K5150J0**	0.8 ±0.1	4000	16000		
18 pF	B37871K5180J0**	0.8 ±0.1	4000	16000		
22 pF	B37871K5220J0**	0.8 ±0.1	4000	16000		
27 pF	B37871K5270J0**	0.8 ±0.1	4000	16000		
33 pF	B37871K5330J0**	0.8 ±0.1	4000	16000		
39 pF	B37871K5390J0**	0.8 ±0.1	4000	16000		
47 pF	B37871K5470J0**	0.8 ±0.1	4000	16000		
56 pF	B37871K5560J0**	0.8 ±0.1	4000	16000		
68 pF	B37871K5680J0**	0.8 ±0.1	4000	16000		
82 pF	B37871K5820J0**	0.8 ±0.1	4000	16000		
100 pF	B37871K5101J0**	0.8 ±0.1	4000	16000		
120 pF	B37871K5121J0**	0.8 ±0.1	4000	16000		
150 pF	B37871K5151J0**	0.8 ±0.1	4000	16000		
180 pF	B37871K5181J0**	0.8 ±0.1	4000	16000		
220 pF	B37871K5221J0**	0.8 ±0.1	4000	16000		
270 pF	B37871K5271J0**	0.8 ±0.1	4000	16000		
330 pF	B37871K5331J0**	0.8 ±0.1	4000	16000		
390 pF	B37871K5391J0**	0.8 ±0.1	4000	16000		
470 pF	B37871K5471J0**	0.8 ±0.1	4000	16000		
560 pF	B37871K5561J0**	0.8 ±0.1	4000	16000		
680 pF	B37871K5681J0**	0.8 ±0.1	4000	16000		
820 pF	B37871K5821J0**	0.8 ±0.1	4000	16000		
1.0 nF	B37871K5102J0**	0.8 ±0.1	4000	16000		
1.2 nF	B37871K5122J0**	0.8 ±0.1	4000	16000		
1.5 nF	B37871K5152J0**	0.8 ±0.1	4000	16000		
1.8 nF	B37871K5182J0**	0.8 ±0.1	4000	16000		
2.2 nF	B37871K5222J0**	0.8 ±0.1	4000	16000		
2.7 nF	B37871K5272J0**	0.8 ±0.1	4000	16000		
3.3 nF	B37871K5332J0**	0.8 ±0.1	4000	16000		

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Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 1206, 50 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel	Blister tape, ∅180-mm reel	Blister tape, ∅330-mm reel
			** ≙ 60	** ≙ 70	** ≙ 62	** ≙ 72
C_R	Ordering code	mm	pcs./reel	pcs./reel	pcs./reel	pcs./reel
3.9 nF	B37871K5392J0**	0.8 ±0.1	4000	16000		
4.7 nF	B37871K5472J0**	1.2 ±0.1			3000	12000
5.6 nF	B37871K5562J0**	1.2 ±0.1			3000	12000

Ordering codes and packing for C0G, 100 VDC, nickel barrier terminations

Case size 1206, 100 VDC

		Chip thickness	Cardboard tape, ∅180-mm reel	Cardboard tape, ∅330-mm reel	Blister tape, ∅180-mm reel	Blister tape, ∅330-mm reel
			** ≙ 60	** ≙ 70	** ≙ 62	** ≙ 72
C_R	Ordering code	mm	pcs./reel	pcs./reel	pcs./reel	pcs./reel
33 pF	B37871K1330J0**	0.8 ±0.1	4000	16000		
47 pF	B37871K1470J0**	0.8 ±0.1	4000	16000		
68 pF	B37871K1680J0**	0.8 ±0.1	4000	16000		
100 pF	B37871K1101J0**	0.8 ±0.1	4000	16000		
150 pF	B37871K1151J0**	0.8 ±0.1	4000	16000		
220 pF	B37871K1221J0**	0.8 ±0.1	4000	16000		
330 pF	B37871K1331J0**	0.8 ±0.1	4000	16000		
470 pF	B37871K1471J0**	0.8 ±0.1	4000	16000		
680 pF	B37871K1681J0**	0.8 ±0.1	4000	16000		
1.0 nF	B37871K1102J0**	0.8 ±0.1	4000	16000		
1.5 nF	B37871K1152J0**	0.8 ±0.1	4000	16000		
2.2 nF	B37871K1222J0**	1.2 ±0.1			3000	12000

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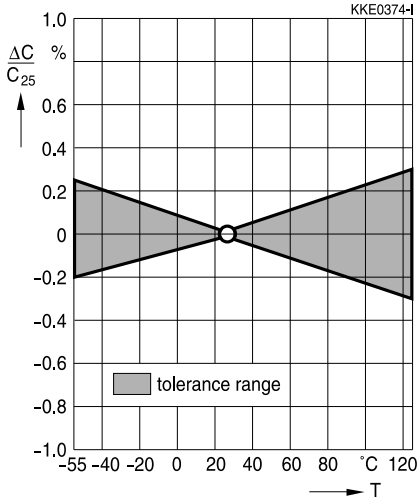
Ordering codes and packing for C0G, 50 VDC, nickel barrier terminations

Case size 1210, 50 VDC

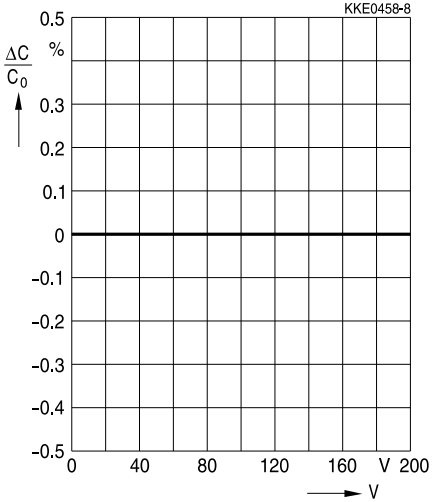
C_R	Ordering code	Chip thickness mm	Blister tape, ∅180-mm reel ** ≙ 62 pcs./reel	Blister tape, ∅330-mm reel ** ≙ 72 pcs./reel
3.3 nF	B37949K5332J0**	0.8 ±0.1	4000	16000
4.7 nF	B37949K5472J0**	0.8 ±0.1	4000	16000
6.8 nF	B37949K5682J0**	0.8 ±0.1	4000	16000
10 nF	B37949K5103J0**	1.2 ±0.1	3000	12000

Typical characteristics[1)]

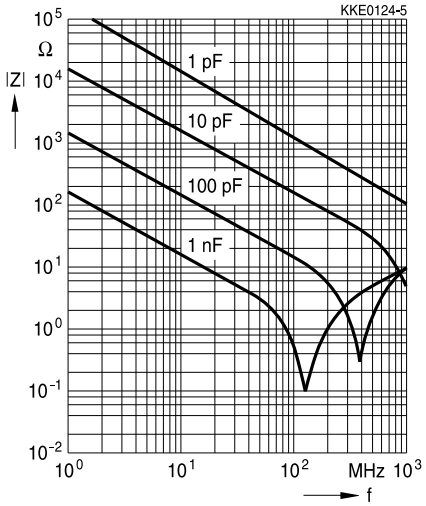
Capacitance change $\Delta C/C_{25}$ versus temperature T



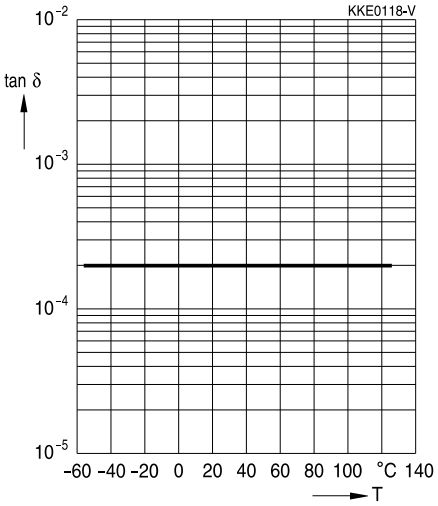
Capacitance change $\Delta C/C_0$ versus superimposed DC voltage V



Impedance |Z| versus frequency f



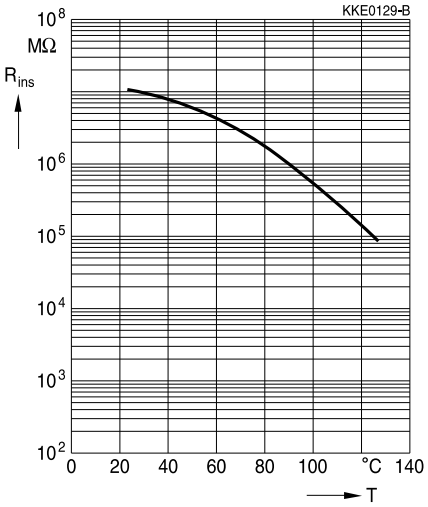
Dissipation factor tan δ versus temperature T



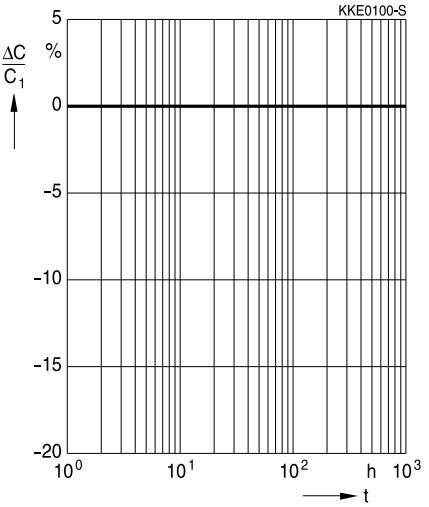
1) For more detailed information on frequency behavior and characteristics see www.epcos.com/mlcc_impedance.

Typical characteristics[1)]

Insulation resistance R_{ins} versus temperature T



Capacitance change $\Delta C/C_1$ versus time t



1) For more detailed information on frequency behavior and characteristics see www.epcos.com/mlcc_impedance.

Cautions and warnings

How to select ceramic capacitors

Remember the following when selecting ceramic capacitors:

1. Ceramic capacitors that must fulfill high quality requirements must be qualified based on AEC-Q200 Rev-C.
2. When ceramic capacitors are used at the connection to a battery or power supply (e.g. clamp 15 or 30 in an automobile) or for safety-relevant applications, two single ceramic capacitors should be connected in series. Alternatively a ceramic capacitor with integrated series circuits should be used in order to reduce the possibility of a short circuit caused by a fracture. The MLSC from EPCOS contains such a series circuit in a single component.
3. The use of multilayer varistors (MLVs) is recommended for ESD protection (see chapter “Effects on mechanical, thermal and electrical stress”, section 1.4).
4. Additional stress factors such as continuous operating voltage or application-specific derating must be taken into account in the selection of components (refer to chapter “Reliability”).

Recommendations for the circuit board design

1. Components with an optimized geometrical design are preferable where permitted by the application.
2. Use at least FR4 circuit board material.
3. Geometrically optimized circuit boards are preferable, especially those that cannot be deformed.
4. Ceramic capacitors should be placed with a sufficient minimum distance from the edge of a circuit board. High bending forces may be exerted there when boards are separated and during further processing of a board (e.g. when incorporating it in a housing).
5. Ceramic capacitors should always be placed parallel to the possible bending axis of a circuit board.
6. Screw connections should not be used to fix a board or connect several boards. Components should not be placed near screw holes. If screw connections are unavoidable, they should be cushioned, for instance using rubber pads.

Recommendations for processing

1. Ensure correct positioning of a ceramic capacitor on the solder pad.
2. Be careful when using casting, injection-molded and molding compounds and cleaning agents. They can damage a capacitor.
3. Support a circuit board and reduce placement forces.
4. Do not straighten a board (manually) if it is distorted by soldering.
5. Separate boards with a peripheral saw, or preferably with a milling head (no dicing or breaking).
6. Be careful when subsequently placing heavy or leaded components (e.g. transformers or snap-in components) because of the danger of bending and fracture.
7. When testing, transporting, packing or inserting a board, avoid any deformation of it so that components are not damaged.
8. Avoid excessive force when plugging a connector into a device soldered onto a board.
9. Only mount ceramic capacitors using the soldering process (reflow or wave) that is permissible for them (see chapter “Soldering directions”).
10. When soldering, select the softest solder profile possible (heating time, peak temperature, cooling time) to avoid thermal stress and damage.
11. Ensure the correct solder meniscus height and solder quantity.
12. Ensure correct dosing of the cement.
13. Ceramic capacitors with external silver-palladium terminations are intended for conductive adhesion - they are not suited for lead-free soldering processes.

This listing does not claim to be complete, but merely reflects the experience of EPCOS AG.

Symbols and terms

Symbol	English	German
A	Area	Fläche
C	Capacitance	Kapazität
C_0	Initial (original) capacitance	Anfangskapazität
C_1	Capacitance value after one hour's use	Kapazitätswert nach einer Stunde
C_R	Rated capacitance	Nennkapazität
C_{20}	Capacitance at 20 °C	Kapazität bei 20 °C
C_{25}	Capacitance at 25 °C	Kapazität bei 25 °C
ΔC	Capacitance change	Kapazitätsänderung
D	Bending displacement	Durchbiegung
E_a	Activation energy	Aktivierungsenergie
ESR	Equivalent series resistance	Ersatzserienwiderstand
F	Force	Kraft
f	Frequency	Frequenz
f_{meas}	Measuring frequency	Messfrequenz
f_{res}	Self-resonant frequency	Eigenresonanzfrequenz
I_{test}	Test current	Prüfstrom
k	Ageing constant	Alterungskonstante
L	Inductance	Induktivität
N	Quantity (integer values)	Anzahl (ganzzahliger Wert)
P_{loss}	Power dissipation or loss	Verlustleistung
Q_{el}	Electrical charge	Elektrische Ladung
Q	Quality	Güte
R_{ins}	Insulation resistance	Isolationswiderstand
R_P	Parallel resistance	Parallelwiderstand
R_S	Series resistance (circuit resistance)	Serienwiderstand
S_V	Rate of rise of a voltage pulse	Flankensteilheit eines Spannungsimpulses
T	Temperature	Temperatur
T_{meas}	Measuring temperature	Messtemperatur
T_{op}	Operating temperature	Betriebstemperatur
T_{ref}	Reference temperature	Bezugstemperatur
T_{test}	Test temperature	Prüftemperatur
t	Time	Zeit
t_r	Rise time of a voltage pulse	Anstiegszeit eines Spannungsimpulses
t_{test}	Test duration	Prüfdauer
tan δ	Dissipation factor	Verlustfaktor

SMD

Symbol	English	German
V	Voltage	Spannung
V_0	Initial (original) voltage (basic voltage level)	Anfangsspannung (Spannungsgrundpegel)
V_{meas}	Measuring voltage	Messspannung
V_R	Rated voltage	Nennspannung
V_S	Amplitude of a voltage pulse	Hub des Spannungsimpulses
V_{RMS}	Measuring (root-mean-square or effective) AC voltage	Effektivspannung
V_{test}	Test voltage	Prüfspannung
|Z|	Magnitude of impedance (AC resistance)	Betrag der Impedanz (Wechselstromwiderstand)
α	Temperature coefficient	Temperaturkoeffizient
ε_0	Absolute dielectric constant	Absolute Dielektrizitätskonstante
ε_r	Relative dielectric constant	Relative Dielektrizitätskonstante
λ	Failure rate	Ausfallrate
τ	Time constant	Zeitkonstante

Abbreviations / Notes

Symbol	English	German
e	Lead spacing (in mm)	Rastermaß (in mm)
SMD	Surface-mounted devices	Oberflächenmontierbares Bauelement
*	To be replaced by a number in ordering codes, type designations etc.	Platzhalter für Zahl im Bestellnummern-code oder für die Typenbezeichnung.
+	To be replaced by a letter.	Platzhalter für einen Buchstaben.
	All dimensions are given in mm.	Alle Maße sind in mm angegeben.
	The commas used in numerical values denote decimal points.	Verwendete Kommas in Zahlenwerten bezeichnen Dezimalpunkte.

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