

TITLE: SHIELD BEADS AND ROUND CABLE CORES	EFFECTIVE: August 12, 2011 Rev. 5
DEVELOPED BY: FRANKLIN DEMUTH	SUPERSEDES: Rev. 4
UPDATE RESPONSIBILITY: QUALITY DEPARTMENT	

**0 Shield Beads and Round Cable Cores – General**

0.1 Refer to the most current revision of the Fair-Rite Products document *Visual Inspection – Definitions & General Criteria* for irregularity definitions.

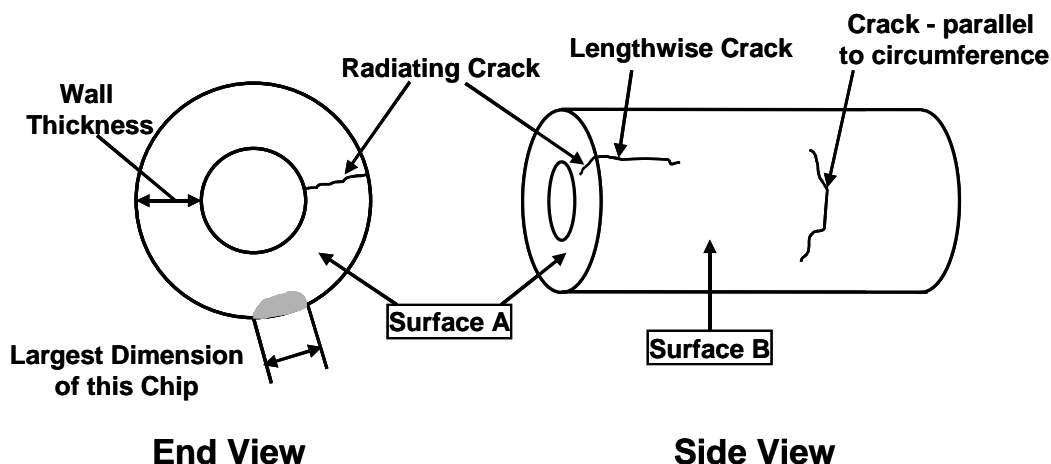


Figure 1

**1 Limits for Chips by Part Size**

1.1 The largest dimension of any chip may never exceed the general maximum set in *Visual Inspection – Definitions & General Criteria*.

Core Size	Surface	Max. Size Allowed	Max Qty
Nominal OD of Less than 0.125in (3.2mm)	A, B	No limit. No broken parts are allowed	N/A
Nominal OD of 0.125in (3.2mm) to 0.25in (6.3mm)	A	No limit	N/A
	B	Less than 33.3% (1/3) of the Bead length	1
Nominal OD greater than 0.25 (6.3mm) to 0.5in (12.7mm)	A	No limit	3 on each surface, 5 total
	B	Less than 25% (1/4) of the Bead length or 50% (1/2) of the wall thickness, whichever is smaller	
Nominal OD greater than 0.5in (12.7mm)	A	Less than 50% (1/2) of the wall thickness to max of 5 mm	3 on each surface, 5 total
	B	Less than 25% (1/4) of the Bead length to a max equiv. area of 5 mm x 7 mm; less than max depth of 0.25 mm	

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Actual size 5mm X 7mm

**2 Limits for Cracks**

Crack Type	Max. Size Allowed	Max Qty
Radiating / Lengthwise	Less than 20% (1/5) of the Wall Thickness	1
Parallel to Circumference	33.3% (1/3) of circumference – must be unopened	1

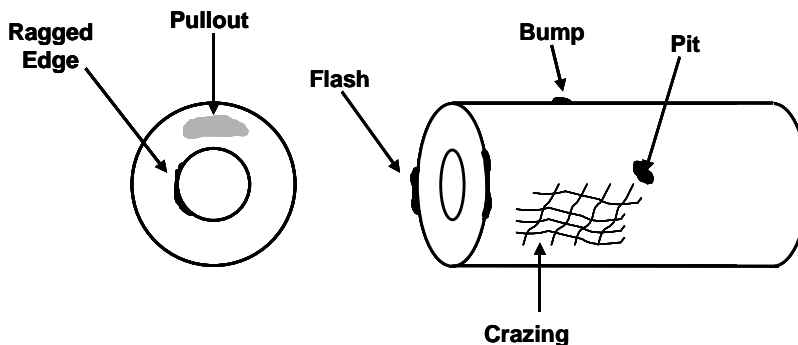


Figure 2

**3 Limits for Pullout, Bumps, Pits, etc.**

Type	Max. Size Allowed	Max Qty
Crazing	No limit	N/A
Pits	See chip spec.	See chip spec.
Bumps	Small to Moderate Bumps that do not interfere with part fit or function are allowed	Unlimited
Ragged Edges	Ragged Edges, as defined in Fair-Rite document <i>Visual Inspection – Definitions &amp; General Criteria</i> , are allowed.	Entire length of relevant edge(s)
Pullout	0.003in (0.076mm) deep	Cumulative area of Pullout must be less than 25% (1/4) of the relevant surface area
Sticking	No limit	N/A

**4 Limits for Flash**

Core ID Size	Max. Size Allowed
Less than or equal to 0.12in (3mm)	Flash is allowed. However, flash can never interfere with part size.
Greater than 0.12in (3mm)	Flash is allowed unless the part is burnished. If the part is burnished, no flash is allowed. Flash can never interfere with part size.

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**Associated Documents:**

4.1 Fair-Rite Products: *Visual Inspection – Definitions & General Criteria*

**5 Revision History:**

Revision Number	Reason for Change	Revision Date
1	Section 8.0 revised	4/1/98
2	Complete Revision	10/29/2007
3	Revised Section 1.1	10/25/10
4	Revised Section 1.1	8/12/11

**References:**

International Electrotechnical Commission (IEC) International Standard 60424-1: *Ferrite Cores – Guide on the Limits of Surface Irregularities Part 1: General specification* (First Edition 1999-05)

International Electrotechnical Commission (IEC) International Standard 60424-4: *Ferrite Cores – Guide on the Limits of Surface Irregularities Part 4: Ring-cores* (First Edition 2001-02)

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