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Reaffirmed 2009

RP 123-2004
Revision of RP 123-1997

SMPTE RECOMMENDED PRACTICE

Dimensions of Tape Splices on 8-mm Type S Motion-Picture Film, Projection Type

1 Scope

This practice specifies the dimensions of mated cut splices on 8-mm type S motion-picture film made with an adhesive tape and intended only for projection.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this practice. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this practice are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

SMPTE 149-1999, Motion-Picture Film (8-mm Type S) — Perforated 1R

3 Dimensions

3.1 The dimensions shall be as given in figure 1 and table 1 and apply to a freshly-made splice.

3.2 The mated cut of the film shall fall within the area defined by dimensions A, C, and D. However, if the mated cut is not a straight cut made on one frameline, the cut configuration shall intrude into only one of the two adjoining picture frames.

3.3 The spliced films shall not be offset by more than 0.05 mm (0.002 in), dimension G, as measured by the difference in the alignment of the reference edge side of the perforation holes on either side of the spliced halves.

3.4 The angle between the respective edges of the spliced film shall be 180° ± 8′. Thus, the spliced film shall be aligned to the extent that, when one portion of the film is placed against a straightedge, the other portion will not deviate more than 0.35 mm (0.014 in) in 15.2 cm (6 in).

3.5 Except as described in 3.6, the dimensions of the tape applied to secure the splice shall be such as not to interfere with the film dimensions (especially perforations) as specified in SMPTE 149, and fall within the area described by dimension F. The width of the adhesive material should encompass the full width of the film on one side; however, on the second side, it may exclude the perforation area and the sound stripe area.

3.6 If the tape used to form a splice is wrapped around the film, either film edge may be used as the wrap-around edge. However, if the perforated edge is used, it is recommended that the splice add no more than 0.05 mm (0.002 in) to the film width. The overall width of the splice area should not exceed 8.10 mm (0.319 in). If the film is trimmed after the wrap-around splice has been made, the film width shall not be less than 7.92 mm (0.312 in) and shall not affect the perforated edge of the film. Wrap-around splices are not preferred

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inasmuch as they interfere with the reproduction of magnetic audio records, and should be used only when additional strength is required such as for continuous-loop systems.

NOTES

1 The splice should have a negligible gap between the mated cuts of the film ends and there should not be any film overlap at the splice (see annex A.1).

2 Films joined with tape splices are not acceptable for use as originals in commercial printing operations or those intended for magnetic striping (see SMPTE RP 122 for such usage).

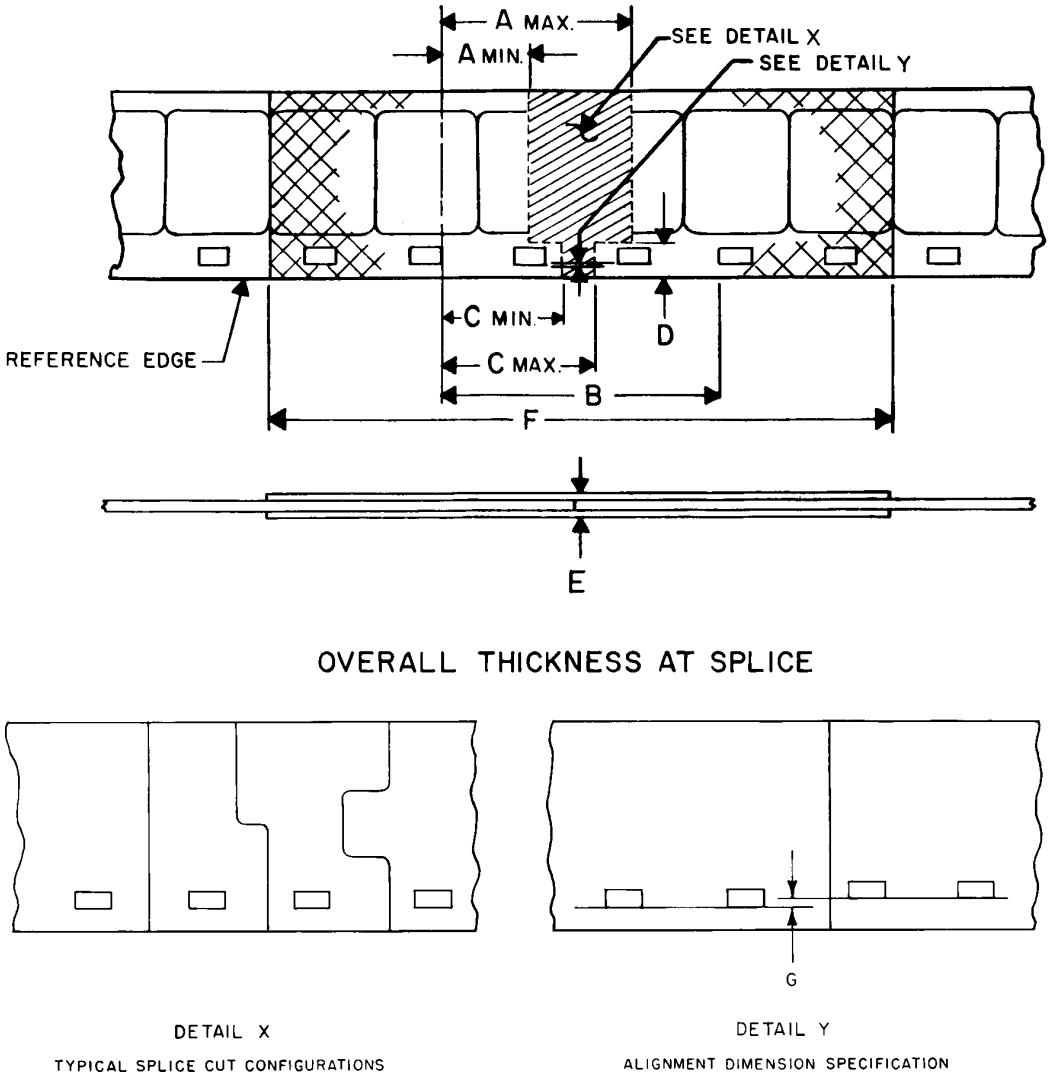

Figure 1 – Tape splices

Table 1 – Dimensions

Dimensions	Millimeters		Inches	
A	3.66	min	0.144	min
	7.90	max	0.311	max
B[1)]	11.53	± 0.03	0.454	± 0.01
C	5.00	min	0.197	min
	6.55	max	0.258	max
D	1.57	min	0.062	min
E	0.25	max	0.010	max
F	25.4	max	1.00	max
G	0.05	max	0.002	max

[1)]Dimension B is based on a perforation pitch of 4.23 mm (0.1667 in). Allowance has been made for 0.2% film shrinkage.

Annex A (informative)
Additional data

A.1 When bent into an arc of approximately 50-mm (2-in) diameter, the spliced film should flex smoothly, with no excessive stiffness or tendency to fold. Tape should always be applied to both sides of the film.

A.2 The transverse cut to provide the mated pairs of film for the tape splice may be made in numerous configurations. Detail X shows only some typical configurations. It is desirable, however, to make the splice as inconspicuous as possible; therefore, the transverse cuts would usually be on the frameline or occur in only one frame.

A.3 Dimension B controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks and to the nearer edges of these perforations because they are the edges generally used.

A.4 If tape splices are made with films to which magnetic oxide has been applied or may be applied, it will be necessary to exclude the splicing material from the magnetic record stripe area.

A.5 Visual disruption of the projected image caused by the splice will be minimized if the length of the splicing tape, dimension F, is kept as short as possible within the requirements of dimensional stability. It is anticipated that, as adhesives are improved, the length of the splicing tape may be reduced to one or two frames. Ideally, the ends of the tape should fall on the framelines to minimize visual disruption.

A.6 When the tape splice is used for special applications such as the repair or joining of the ends in a continuous-loop cartridge, the cut configurations should be made wider, as shown on the right side in detail X, to promote better performance in the projection mechanism. To minimize malfunctions caused by splices in continuous-loop cartridges, tape should always be applied to both sides of the film. In certain types of cartridges, when two separate pieces of splicing tapes are used, a more reliable splice is produced when the tapes are offset by one frame.

Annex B (informative)
Bibliography

SMPTE RP 122-1993 (R1997), Dimensions of Cemented Splices on 8-mm Type S Motion-Picture Film, Projection Type