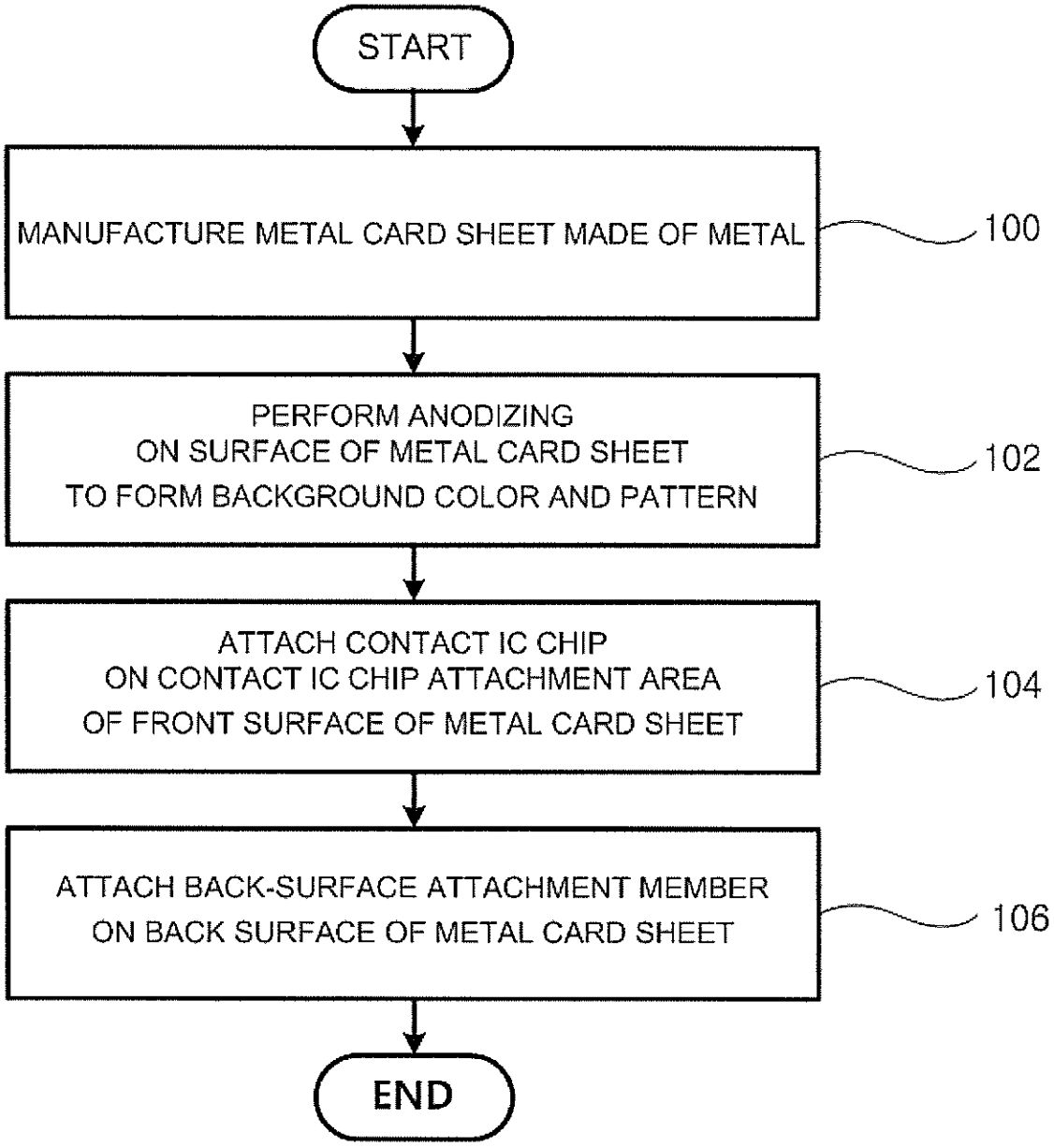
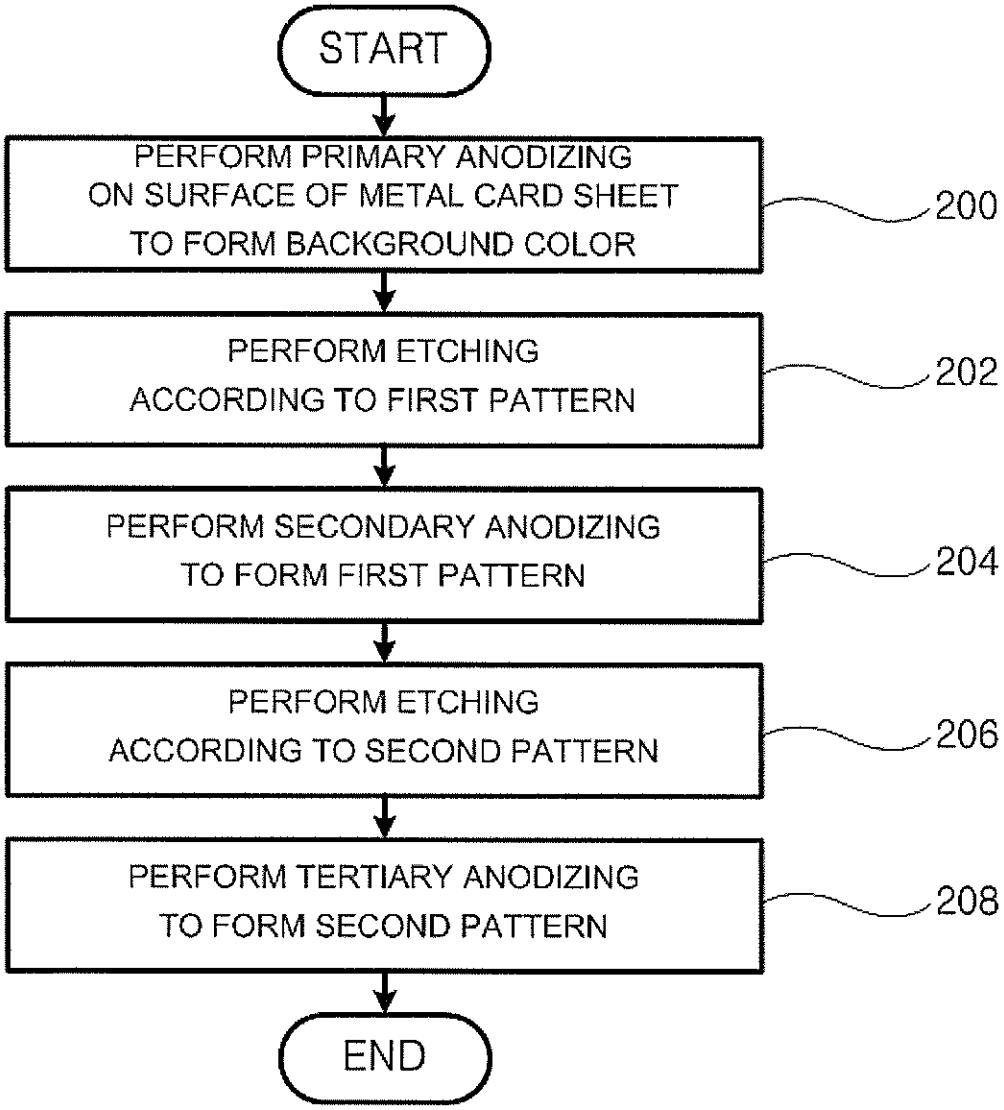
【DRAWINGS】

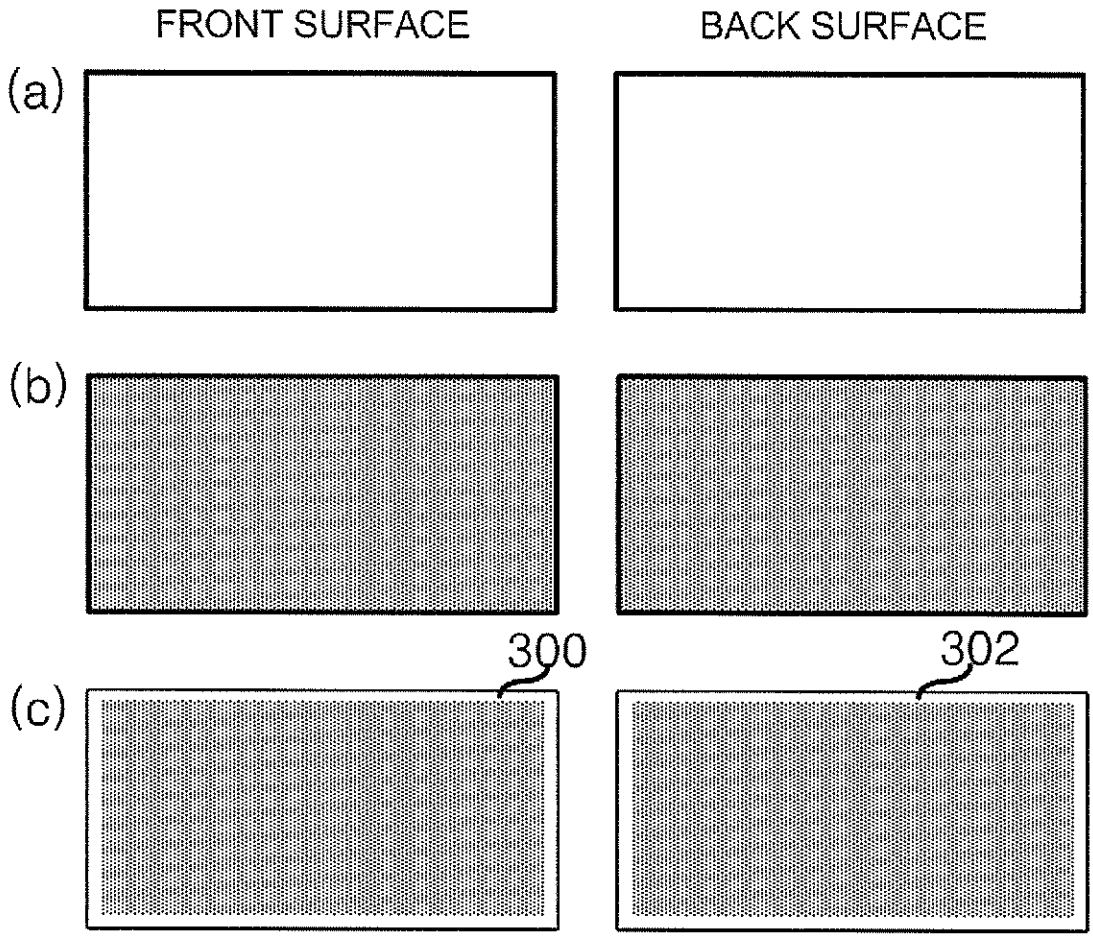
【Figure 1】



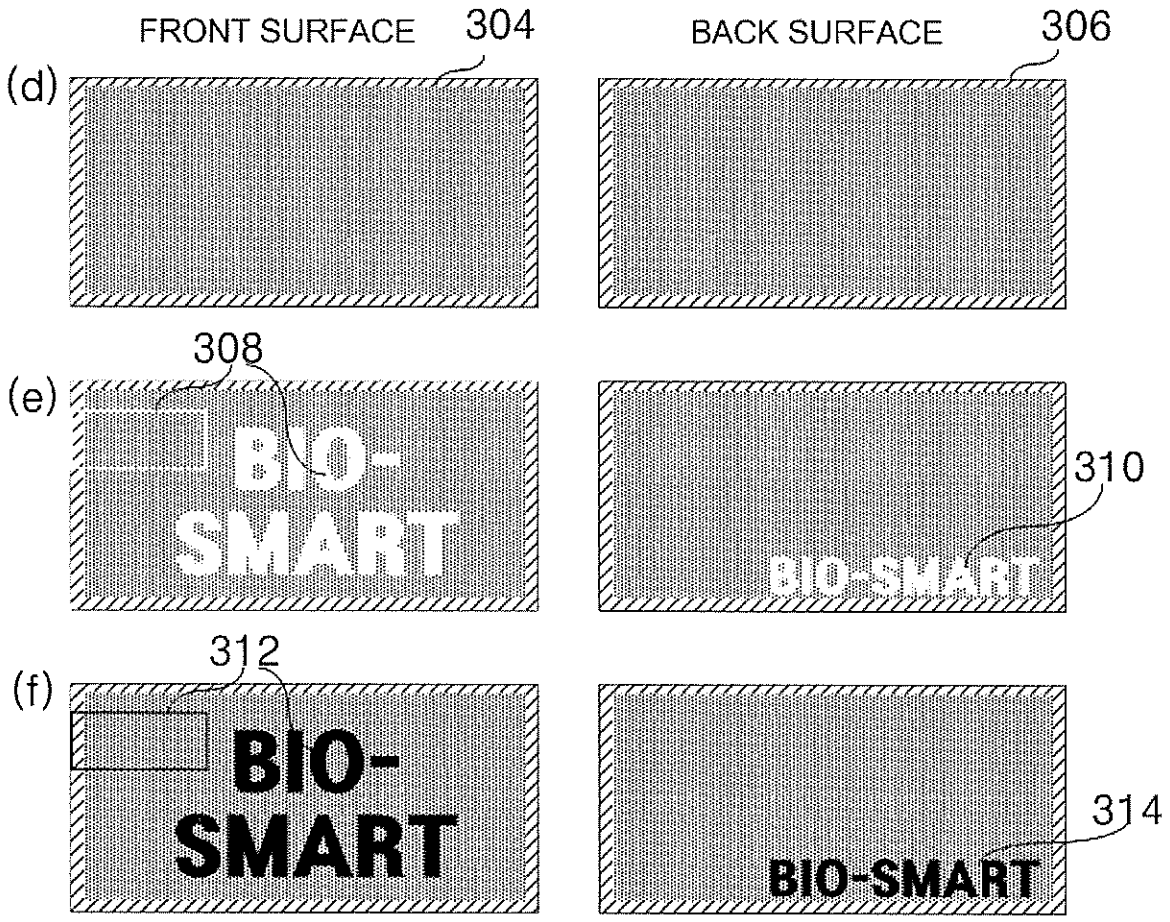
【Figure 2】


START
PERFORM PRIMARY ANODIZING ON SURFACE OF METAL CARD SHEET TO FORM BACKGROUND COLOR
200
PERFORM ETCHING ACCORDING TO FIRST PATTERN
202
PERFORM SECONDARY ANODIZING TO FORM FIRST PATTERN
204
PERFORM ETCHING ACCORDING TO SECOND PATTERN
206
PERFORM TERTIARY ANODIZING TO FORM SECOND PATTERN
208
END

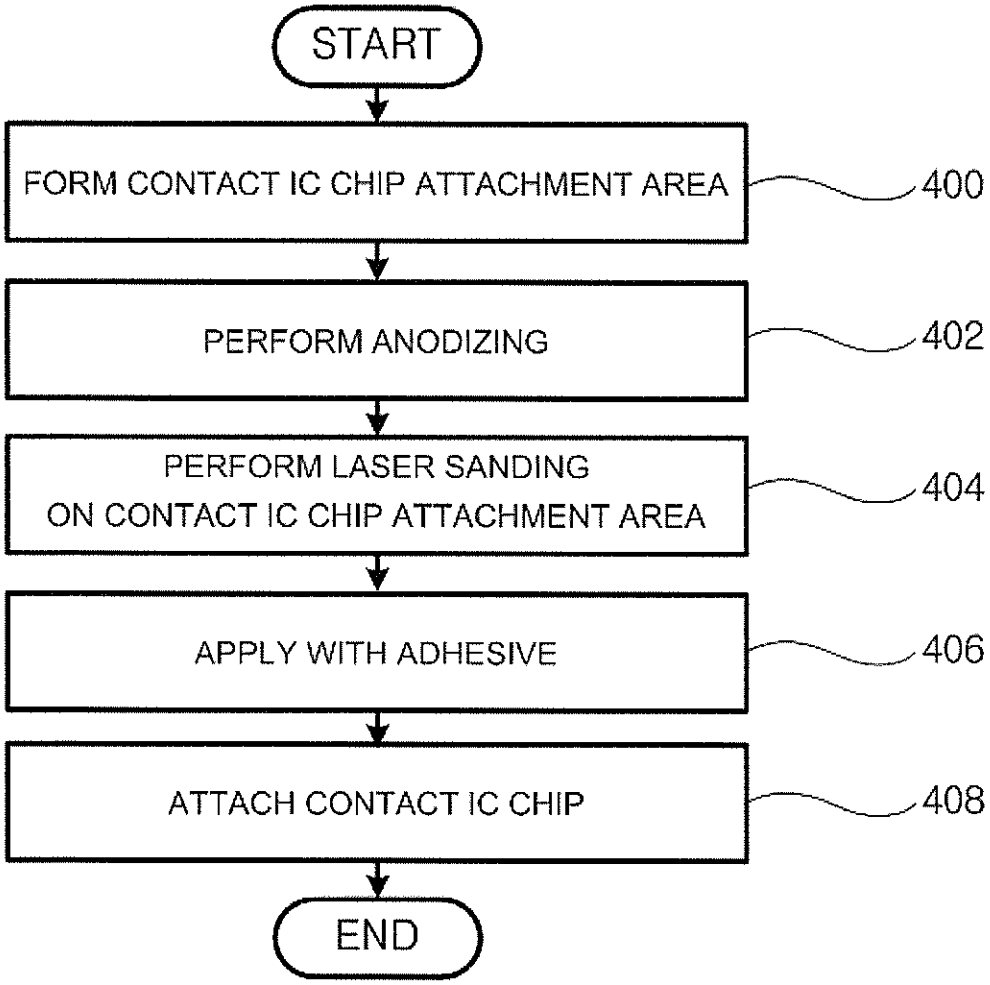
【Figure 3】



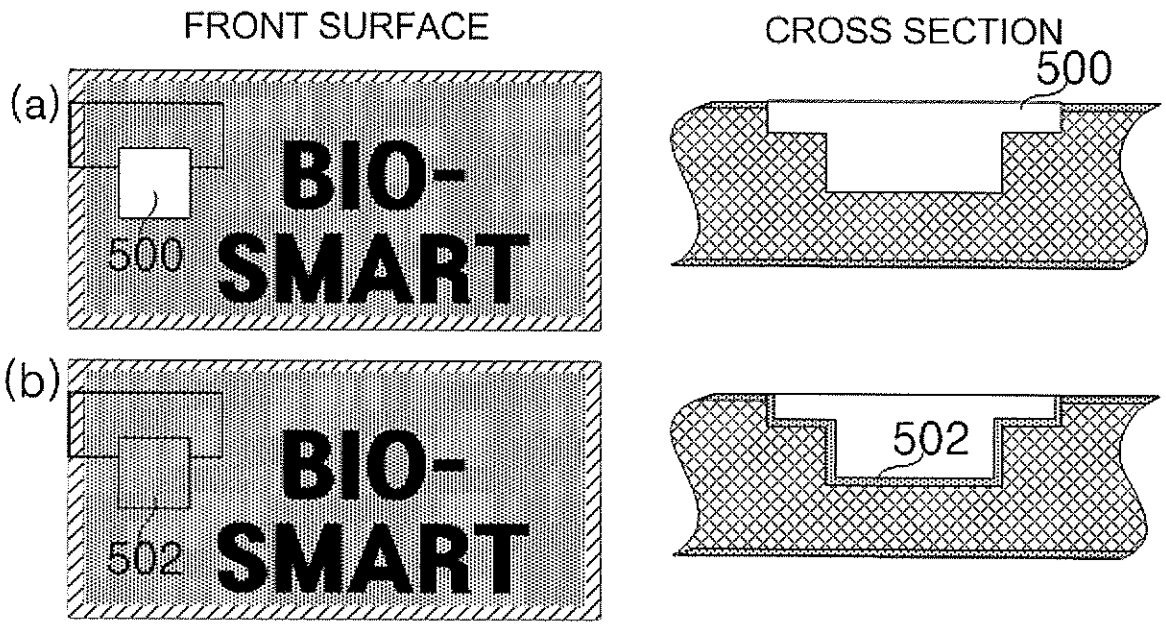
【Figure 4】


FRONT SURFACE
304
BACK SURFACE
306
(d)
308
(e)
BIO-
SMART
BIO-SMART
310
312
(f)
BIO-
SMART
BIO-SMART
314

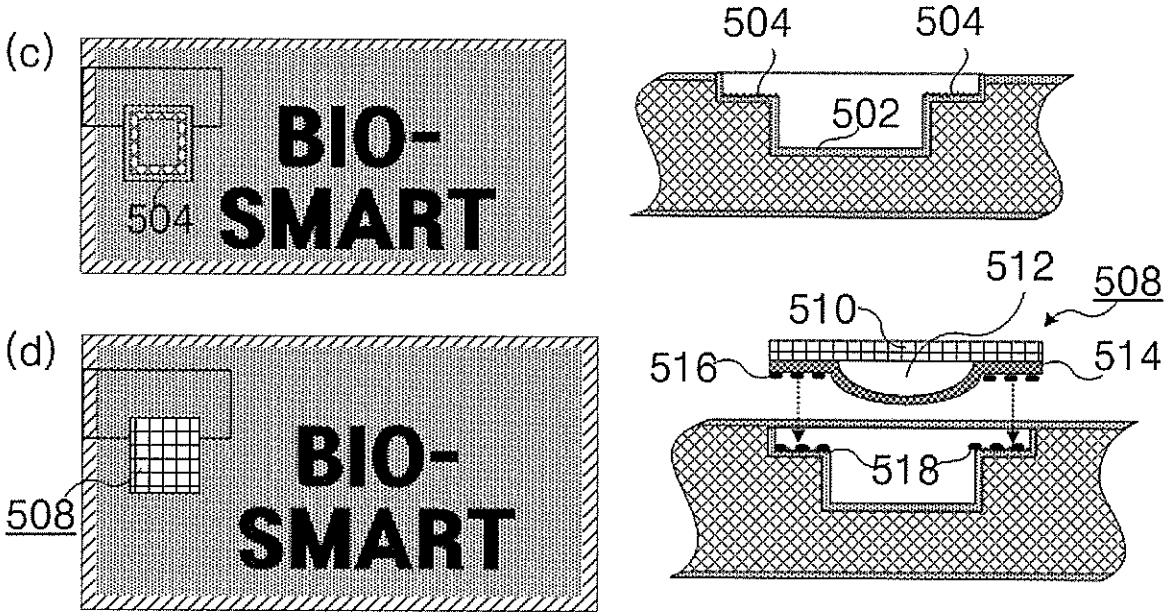
【Figure 5】


START
FORM CONTACT IC CHIP ATTACHMENT AREA
400
PERFORM ANODIZING
402
PERFORM LASER SANDING
ON CONTACT IC CHIP ATTACHMENT AREA
404
APPLY WITH ADHESIVE
406
ATTACH CONTACT IC CHIP
408
END

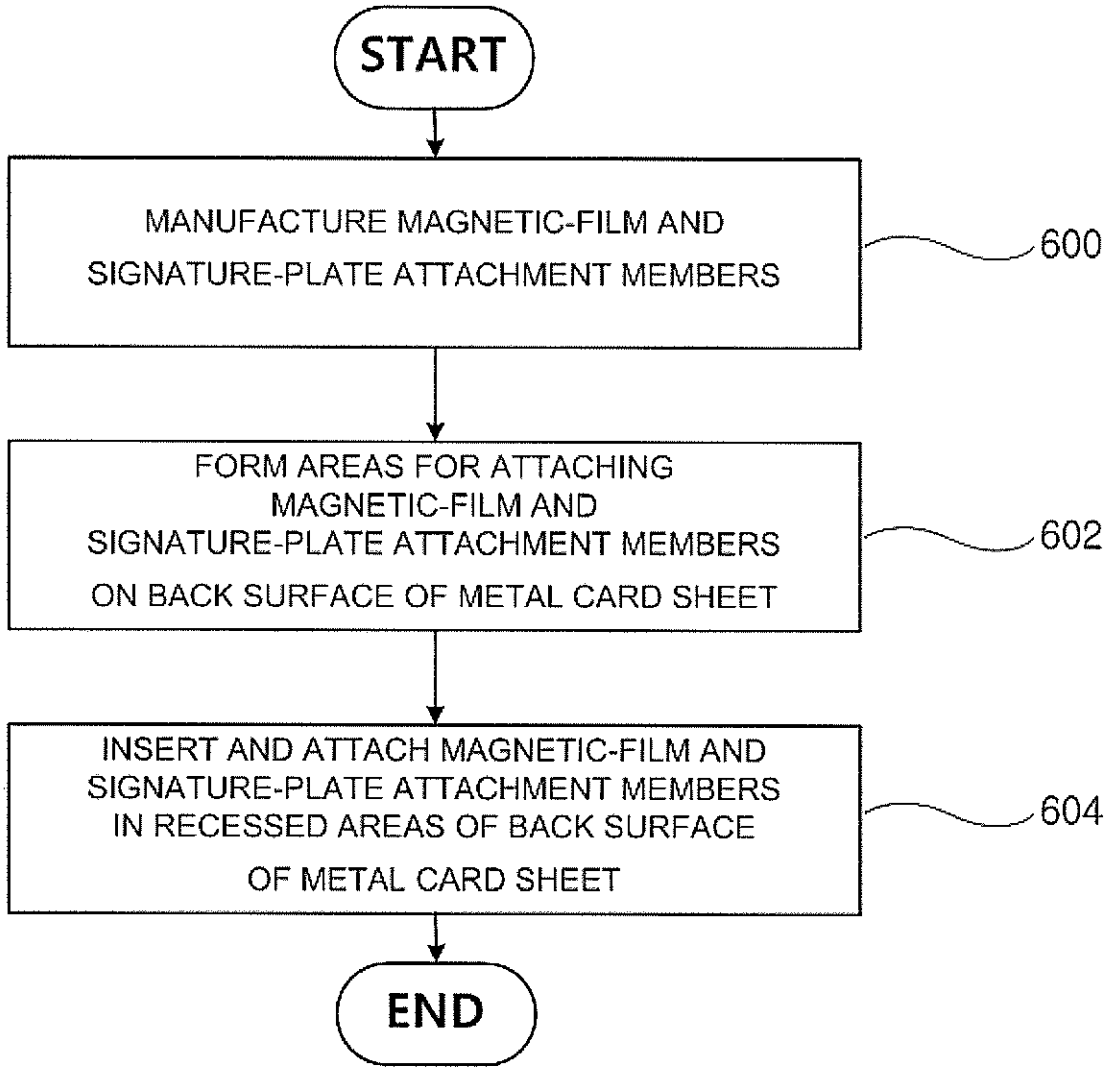
【Figure 6】



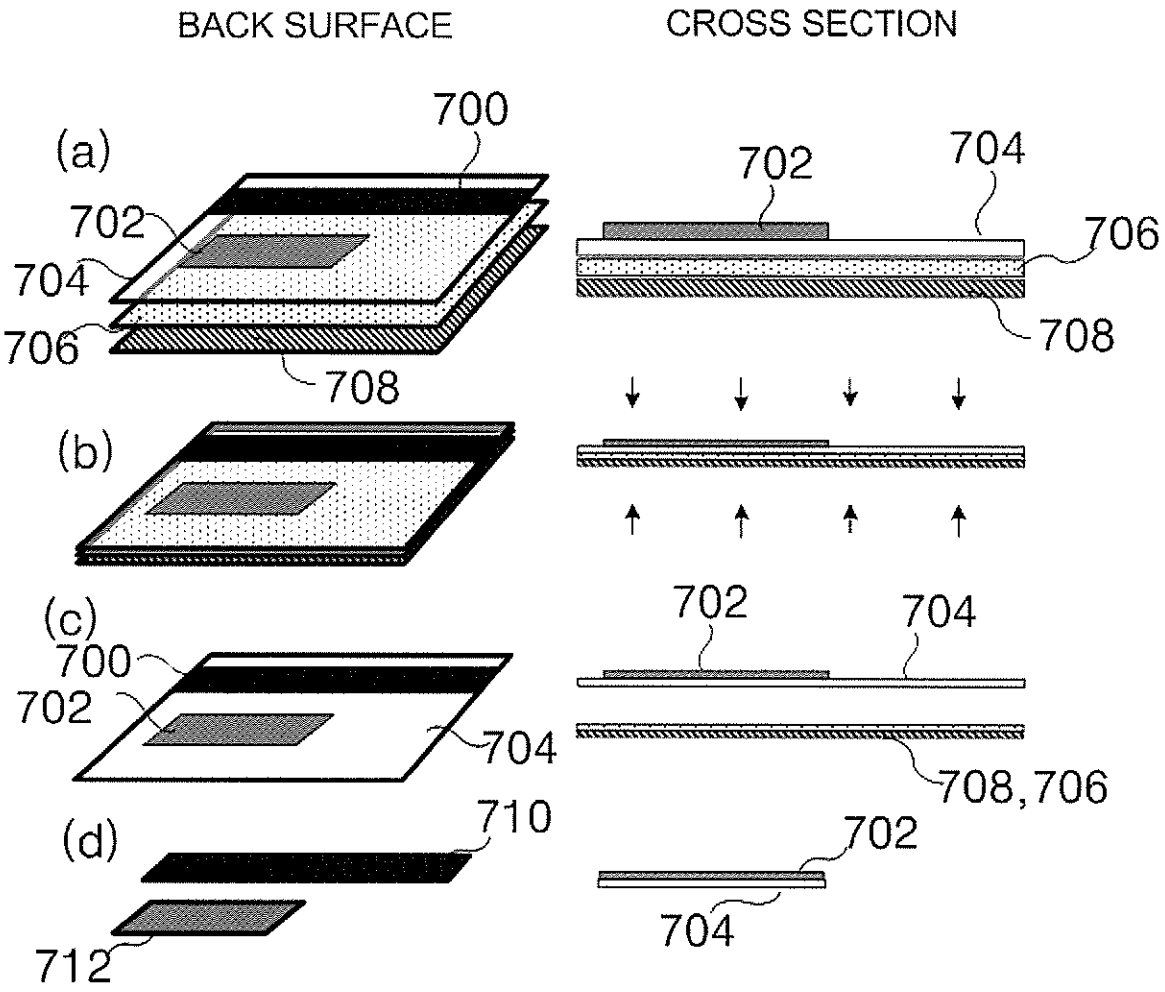
【Figure 7】



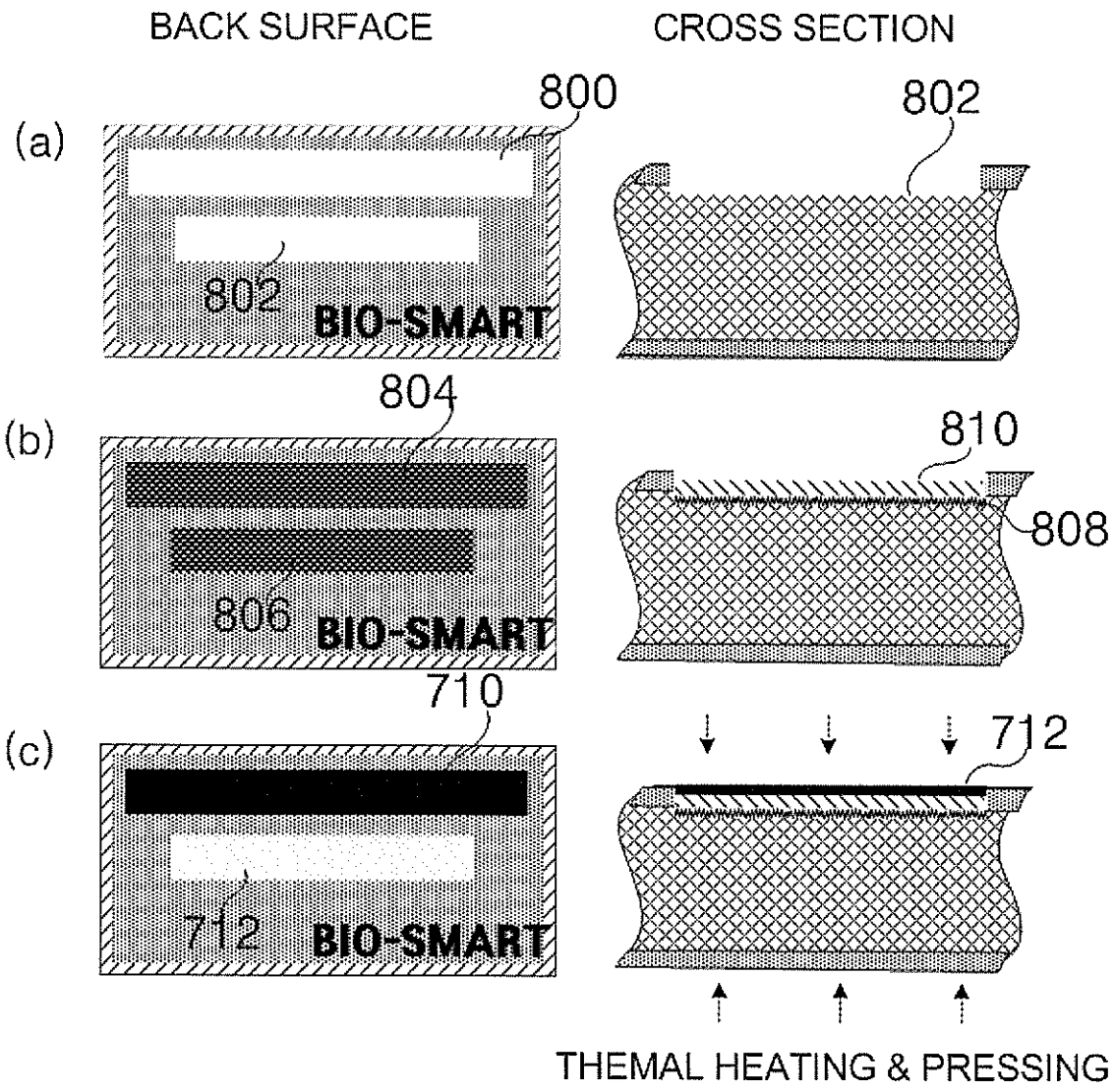
【Figure 8】


START
MANUFACTURE MAGNETIC-FILM AND SIGNATURE-PLATE ATTACHMENT MEMBERS
600
FORM AREAS FOR ATTACHING MAGNETIC-FILM AND SIGNATURE-PLATE ATTACHMENT MEMBERS ON BACK SURFACE OF METAL CARD SHEET
602
INSERT AND ATTACH MAGNETIC-FILM AND SIGNATURE-PLATE ATTACHMENT MEMBERS IN RECESSED AREAS OF BACK SURFACE OF METAL CARD SHEET
604
END

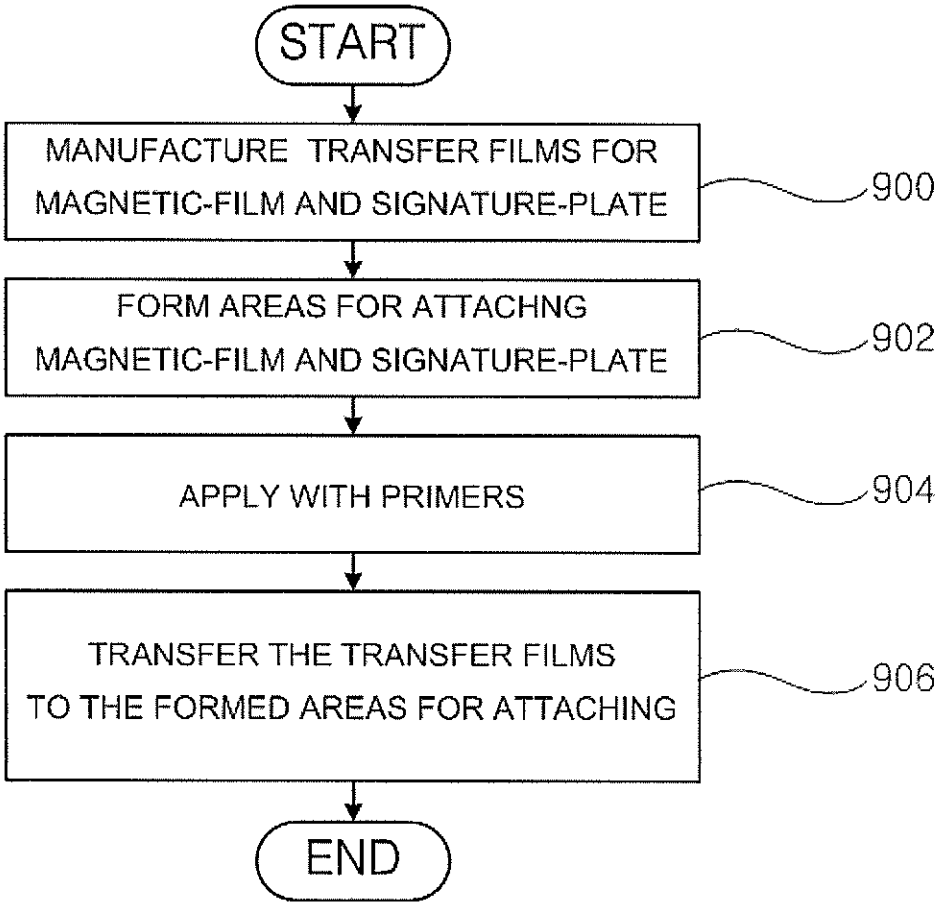
【Figure 9】


BACK SURFACE
CROSS SECTION
(a)
700
702
704
706
708
(b)
(c)
700
702
704
710
712
(d)
702
704
706
708
702
704
708,706
702
704

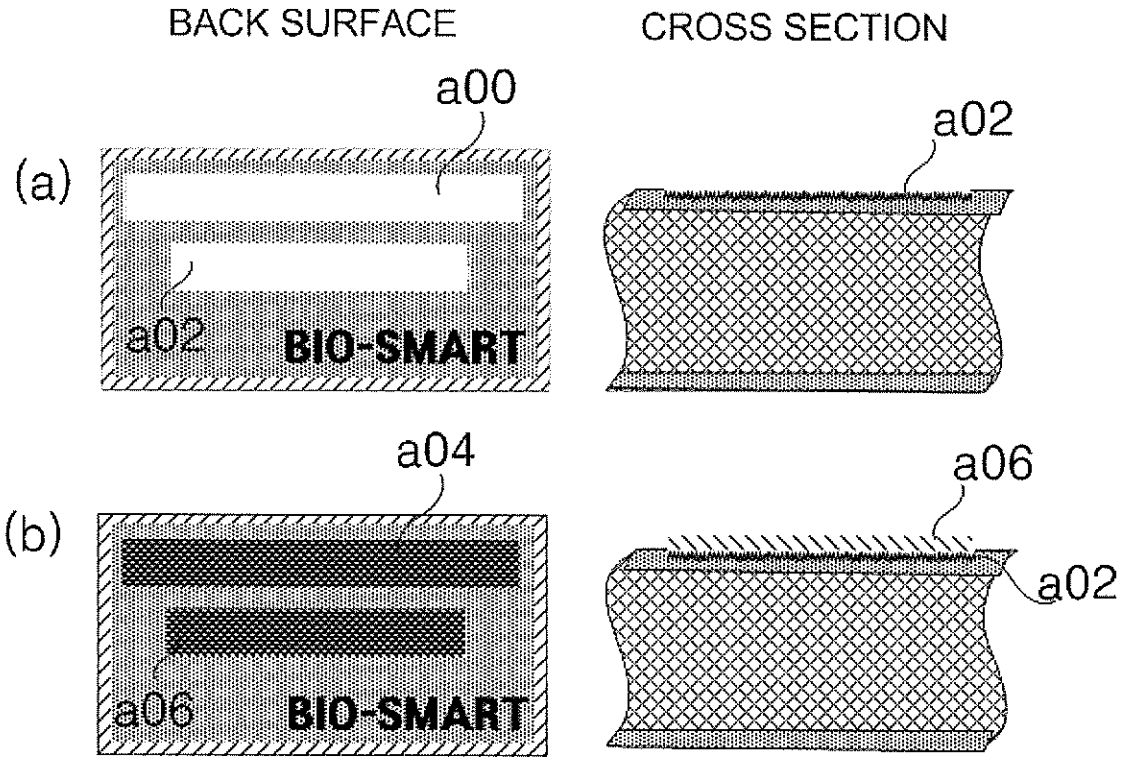
【Figure 10】


BACK SURFACE
CROSS SECTION
(a)
800
802
802
BIO-SMART
(b)
804
806
BIO-SMART
810
808
(c)
710
712
712
BIO-SMART
THEMAL HEATING & PRESSING

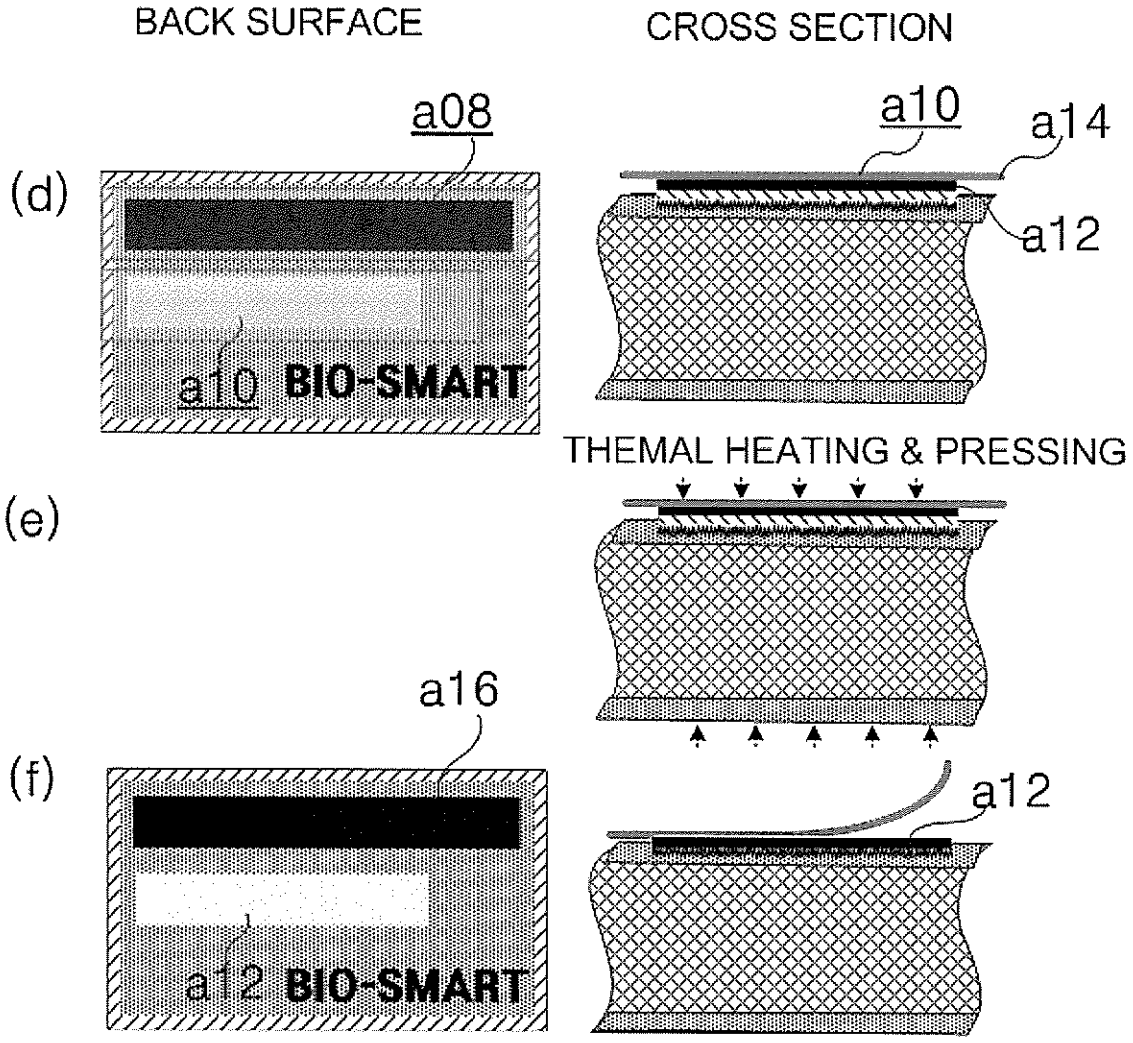
【Figure 11】


START
MANUFACTURE TRANSFER FILMS FOR MAGNETIC-FILM AND SIGNATURE-PLATE
900
FORM AREAS FOR ATTACHNG MAGNETIC-FILM AND SIGNATURE-PLATE
902
APPLY WITH PRIMERS
904
TRANSFER THE TRANSFER FILMS TO THE FORMED AREAS FOR ATTACHING
906
END

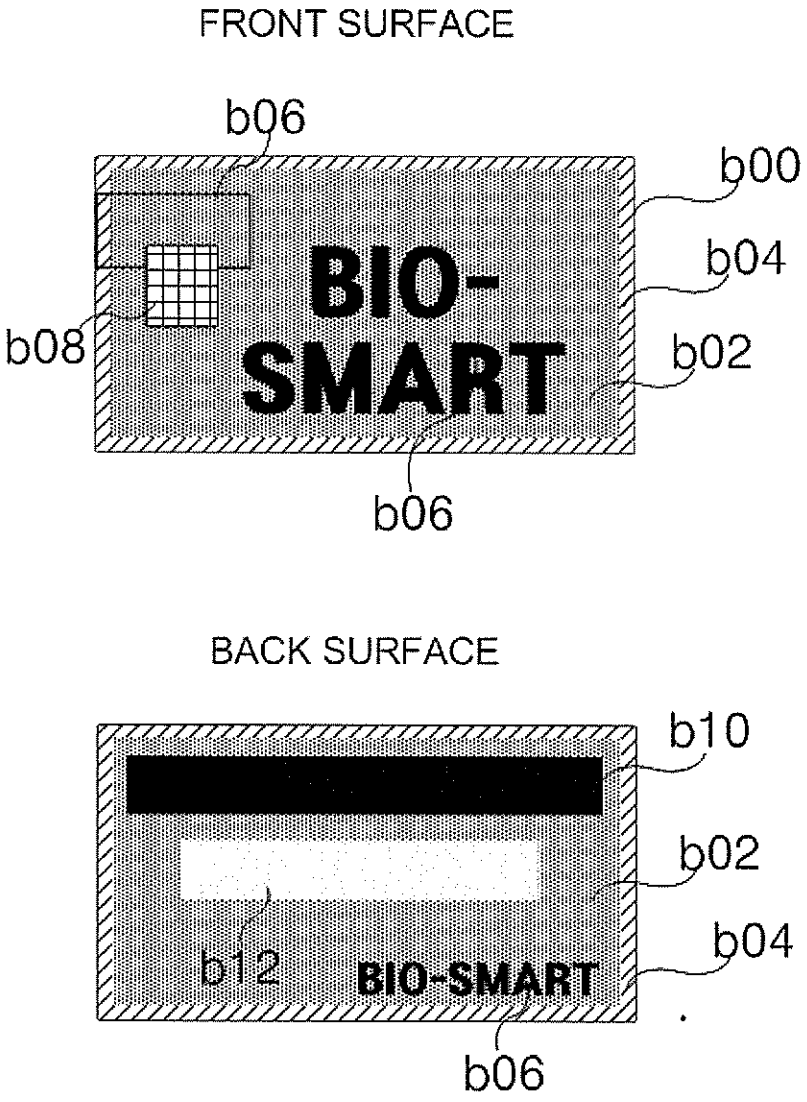
【Figure 12】


BACK SURFACE
CROSS SECTION
(a)
a00
a02
BIO-SMART
a02
(b)
a04
a06
BIO-SMART
a06
a02

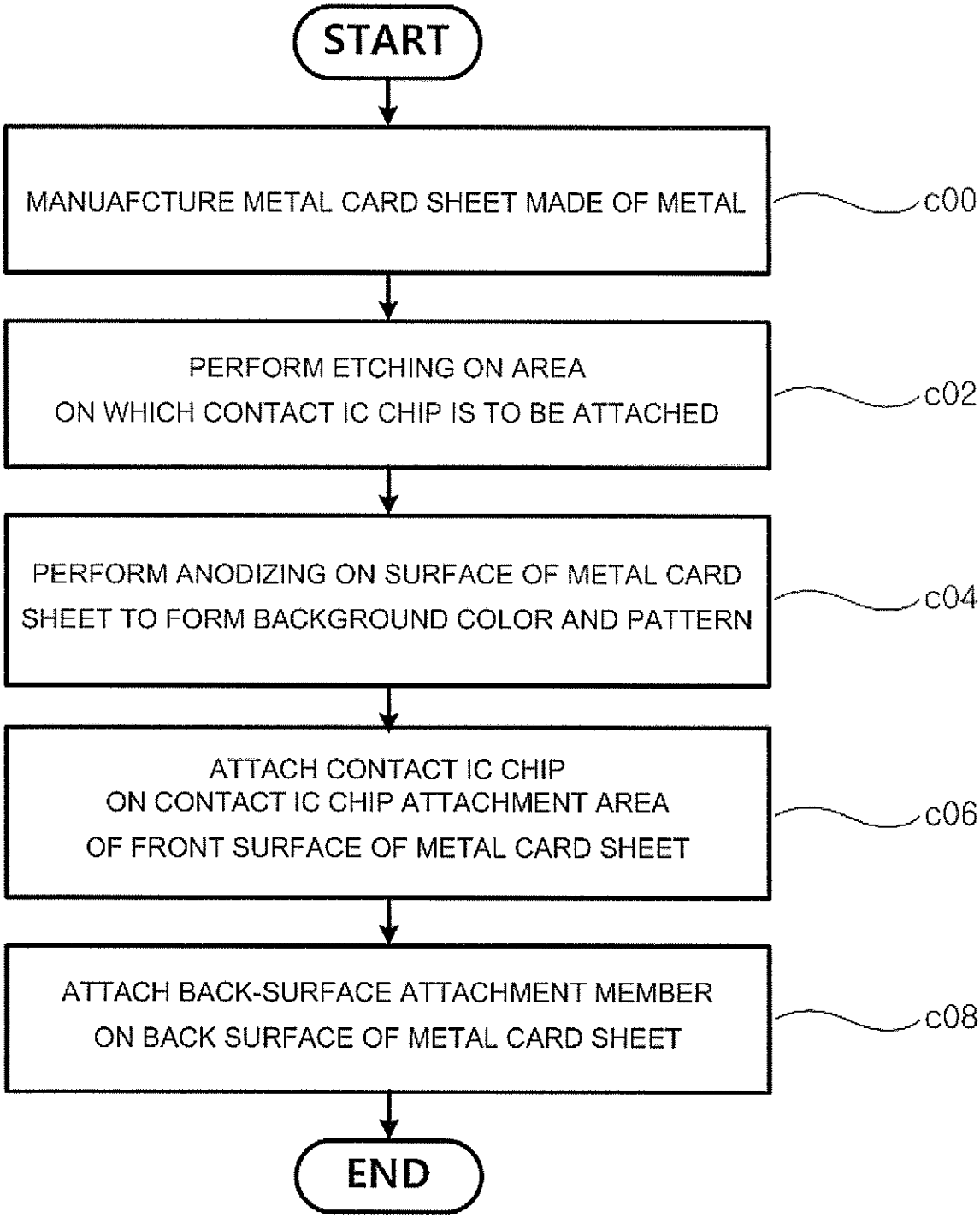
【Figure 13】


BACK SURFACE
CROSS SECTION
(d)
a08
a10
a14
a12
a10 BIO-SMART
THEMAL HEATING & PRESSING
(e)
(f)
a16
a12
a12 BIO-SMART

【Figure 14】


FRONT SURFACE
b06
b00
b04
b08
BIO-
SMART
b02
b06
BACK SURFACE
b10
b02
b12
BIO-SMART
b04
b06

【Figure 15】


START
MANUAFCTURE METAL CARD SHEET MADE OF METAL
c00
PERFORM ETCHING ON AREA
ON WHICH CONTACT IC CHIP IS TO BE ATTACHED
c02
PERFORM ANODIZING ON SURFACE OF METAL CARD
SHEET TO FORM BACKGROUND COLOR AND PATTERN
c04
ATTACH CONTACT IC CHIP
ON CONTACT IC CHIP ATTACHMENT AREA
OF FRONT SURFACE OF METAL CARD SHEET
c06
ATTACH BACK-SURFACE ATTACHMENT MEMBER
ON BACK SURFACE OF METAL CARD SHEET
c08
END