

AIP SUPPLEMENT MALAYSIA

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MALAYSIA

11/2015

16 APR

AIRAC

**KOTA KINABALU FLIGHT INFORMATION REGION
KUCHING INTERNATIONAL AIRPORT
IMPLEMENTATION OF REQUIRED NAVIGATION PERFORMANCE AUTHORISATION
REQUIRED (RNP AR APCH) PROCEDURES
RUNWAY 07 AND RUNWAY 25 AT KUCHING INTERNATIONAL AIRPORT**

1 INTRODUCTION

- 1.1 To correspond with Malaysia Performance Based Navigation (PBN) Plan 2nd Edition 2012, with the objective of enhancing safety and efficiency, RNP AR APCH procedures will be implemented for both runway RWY 07 and RWY 25 at Kuching International Airport.

2 RNP AR APCH PROCEDURES CHARTS

- 2.1 Instrument Approach Charts and the associated FMS Coding information of the corresponding RNP AR APCH procedures are as follows:

2.1.1 RWY 07:

RNAV (RNP) Z RWY 07. See Appendix A-1

2.1.2 RWY 25:

RNAV (RNP) Z RWY 25. See Appendix A-2

3 ATC CLEARANCE FOR RNP AR APCH

- 3.1 RNP AR APCH is designated as supplementary approach procedures.
- 3.2 Pilots who are qualified and wish to fly the new RNP AR APCH procedures shall inform ATC Unit of their intention on initial radio contact. The execution of the requested RNP AR APCH procedure is subject to ATC concurrence, taking into account the prevailing traffic situation.

4 OPERATIONAL APPROVAL

- 4.1 Special authorisation from DCA Malaysia is required to conduct RNP AR APCH.
- 4.2 Operators who intend to conduct RNP AR APCH shall refer to AIC Malaysia 2/2013 for detail application procedures.

4.3 Contact Address:

Department Civil Aviation Malaysia
Flight Operations Sector
No. 27, Persiaran Perdana
Level 2 Block Podium B,
Precinct 4
62618 Putrajaya

5 GNSS RAIM

5.1 RNP AR APCH operations are authorised based on GNSS as the primary infrastructure. It is mandatory for operators who wish to conduct RNP AR APCH to get GNSS RAIM prediction associated with GNSS availability. At this stage, DCA Malaysia will not provide such service and operators who wish to conduct RNP AR APCH procedures are assumed to have their own source for the necessary GNSS information

6 IMPLEMENTATION DATE

6.1 This AIP Supplement and the relevant charts will become effective at 0001UTC on 28 May 2015. A trigger NOTAM will be issued to alert users on the implementation of the RNP AR APCH procedures.

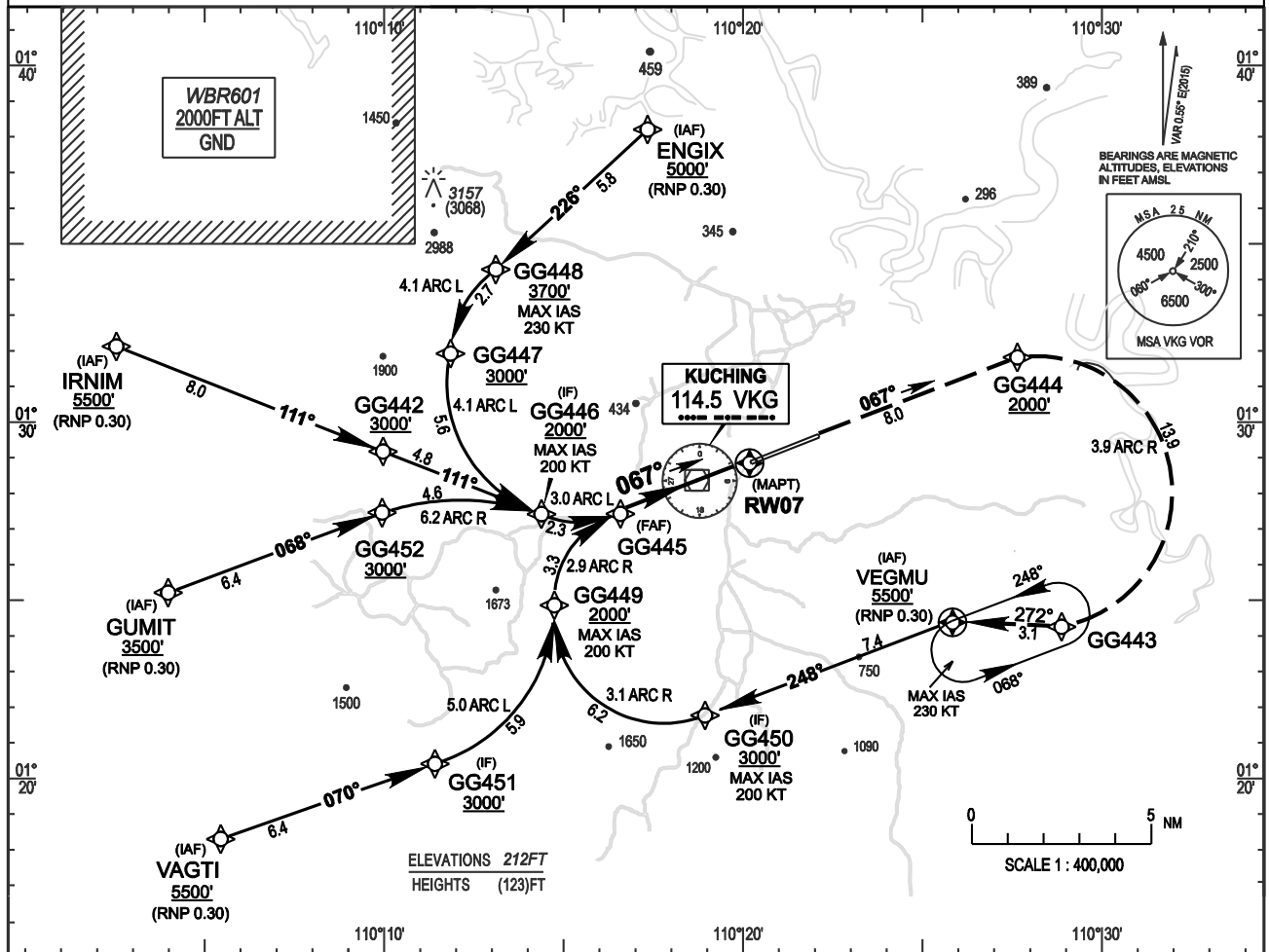
7 CANCELLATION

7.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

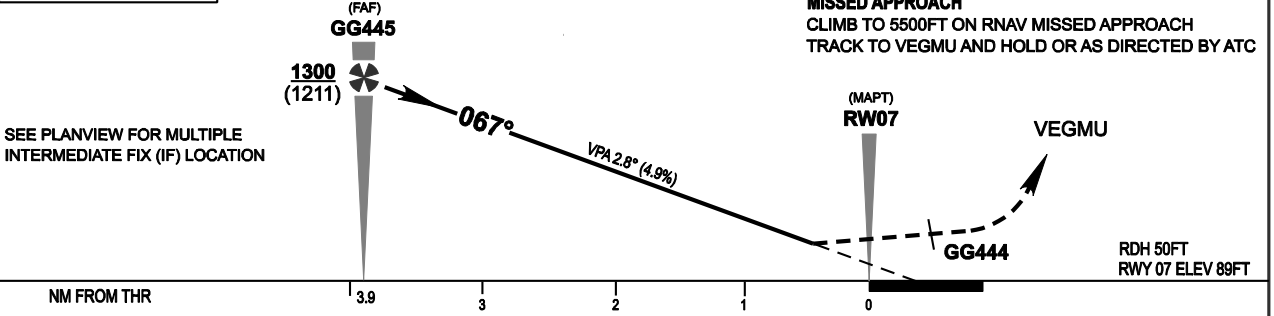
DATO' AZHARUDDIN ABDUL RAHMAN
Director General
Department of Civil Aviation
Malaysia

AERODROME ELEV 89FT HEIGHTS RELATED TO THR RWY 07 - ELEV 89FT	TWR - 118.1 (P) 121.7 (S) SMC - 121.9	APP - 120.2 (P) 123.85 (S) ATIS - 128.4	KUCHING (WBGG) RNAV (RNP) Z RWY 07
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1. AUTHORIZATION REQUIRED
2. DUAL GNSS IRU REQUIRED
3. RF REQUIRED
4. APPROACH NOT AUTHORIZED WHEN AIRPORT TEMPERATURE BELOW 0° OR ABOVE 69° C
5. WBGG ALTIMETER SETTING REQUIRED
6. PAPI AND VERTICAL PATH ANGLE NOT COINCIDENT.



TRANSITION LEVEL : FL130
 TRANSITION ALT : 11000



OCA/H				
ACFT CAT.	A	B	C	D
RNP 0.3	350 (261)			

GND SPEED - KT	70	90	100	120	140	160
RATE OF DESC (2.8°) (FEET/MIN)	347	446	495	594	693	792

DISTANCE TO THR (NM)	3.9	3	2	1	
ALTITUDE (FEET)	1300	900	600	350	

KUCHING (WBGG) / KUCHING INTERNATIONAL AIRPORT MALAYSIA
RNAV (RNP) Z RWY 07

Aeronautical Data Tabulation

Fix / Point	COORDINATES	
VKG	01°28'48.08"N	110°20'03.90"E
ENGIX	01°38'12.39"N	110°17'20.44"E
GUMIT	01°25'12.66"N	110°03'58.50"E
IRNIM	01°32'07.38"N	110°02'32.07"E
VAGTI	01°18'17.92"N	110°05'26.58"E
VEGMU	01°24'24.61"N	110°25'48.23"E
GG442	01°29'10.32"N	110°09'57.92"E
GG443	01°24'15.17"N	110°28'52.61"E
GG444	01°31'48.75"N	110°27'38.70"E
GG445	01°27'25.04"N	110°16'34.98"E
GG446	01°27'25.03"N	110°14'22.98"E
GG447	01°31'55.09"N	110°11'50.77"E
GG448	01°34'16.67"N	110°13'06.58"E
GG449	01°24'51.48"N	110°14'44.59"E
GG450	01°21'46.07"N	110°18'56.34"E
GG451	01°20'24.45"N	110°11'24.74"E
GG452	01°27'27.44"N	110°09'56.47"E
RWY07	01°28'51.63"N	110°20'12.87"E
RF Arc Centre Identifier	COORDINATES	
GG993	01°28'10.02"N	110°29'04.49"E
GG994	01°21'37.30"N	110°12'06.61"E
GG995	01°30'13.29"N	110°15'28.97"E
GG996	01°31'14.98"N	110°15'53.16"E
GG997	01°25'08.92"N	110°09'45.54"E
GG998	01°24'40.66"N	110°17'50.00"E
GG999	01°24'41.28"N	110°17'39.23"E

KUCHING (WBGG) / KUCHING INTERNATIONAL AIRPORT MALAYSIA
RNAV (RNP) Z RWY 07

Route Description

Path Terminator	Waypoint Identifier	Fly Over	Course/Track °M	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KTS)	VPA/TCH	Navigation Specification
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From IRNIM to Final

IF	IRNIM					<u>5500</u>			RNP 0.3
TF	GG442		110.54	8.00		<u>3000</u>			RNP 0.3
TF	GG446		110.54	4.76		<u>2000</u>	200		RNP 0.3
RF CENTER GG995 r= 3.00 NM	GG445			2.26	L	<u>1300</u>			RNP 0.3

From GUMIT to Final

IF	GUMIT					<u>3500</u>			RNP 0.3
TF	GG452		68.49	6.38		<u>3000</u>			RNP 0.3
RF CENTER GG994 r= 6.20 NM	GG446			4.55	R	<u>2000</u>			RNP 0.3
RF CENTER GG995 r= 3.00 NM	GG445			2.26	L	<u>1300</u>			RNP 0.3

From ENGIX to Final

IF	ENGIX					<u>5000</u>			RNP 0.3
TF	GG448		226.30	5.77		<u>3700</u>	230		RNP 0.3
RF CENTER GG996 r= 4.10 NM	GG447			2.72	L	<u>3000</u>			RNP 0.3
RF CENTER GG996 r= 4.10 NM	GG446			5.57	L	<u>2000</u>			RNP 0.3
RF CENTER GG995 r= 3.00 NM	GG445			2.26	L	<u>1300</u>			RNP 0.3

From VAGTI to Final

IF	VAGTI					<u>5500</u>			RNP 0.3
TF	GG451		69.66	6.34		<u>3000</u>			RNP 0.3
RF CENTER GG997 r= 5.00 NM	GG449			5.88	L	<u>2000</u>	200		RNP 0.3
RF CENTER GG999 r= 2.92 NM	GG445			3.32	R	<u>1300</u>			RNP 0.3

From VEGMU to Final

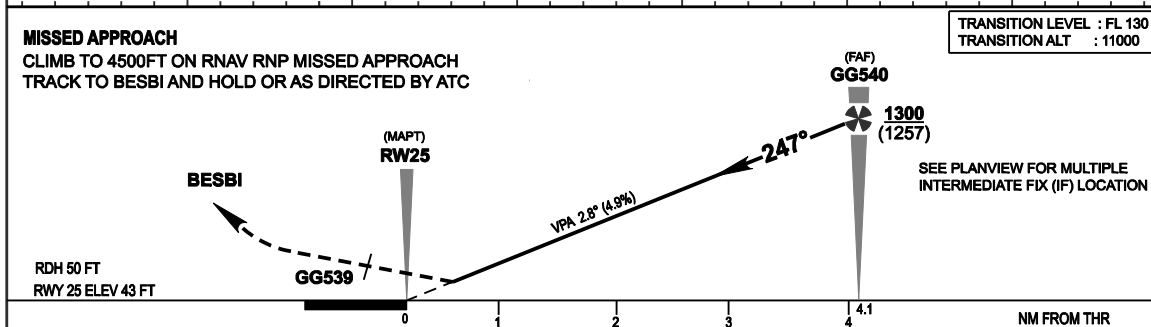
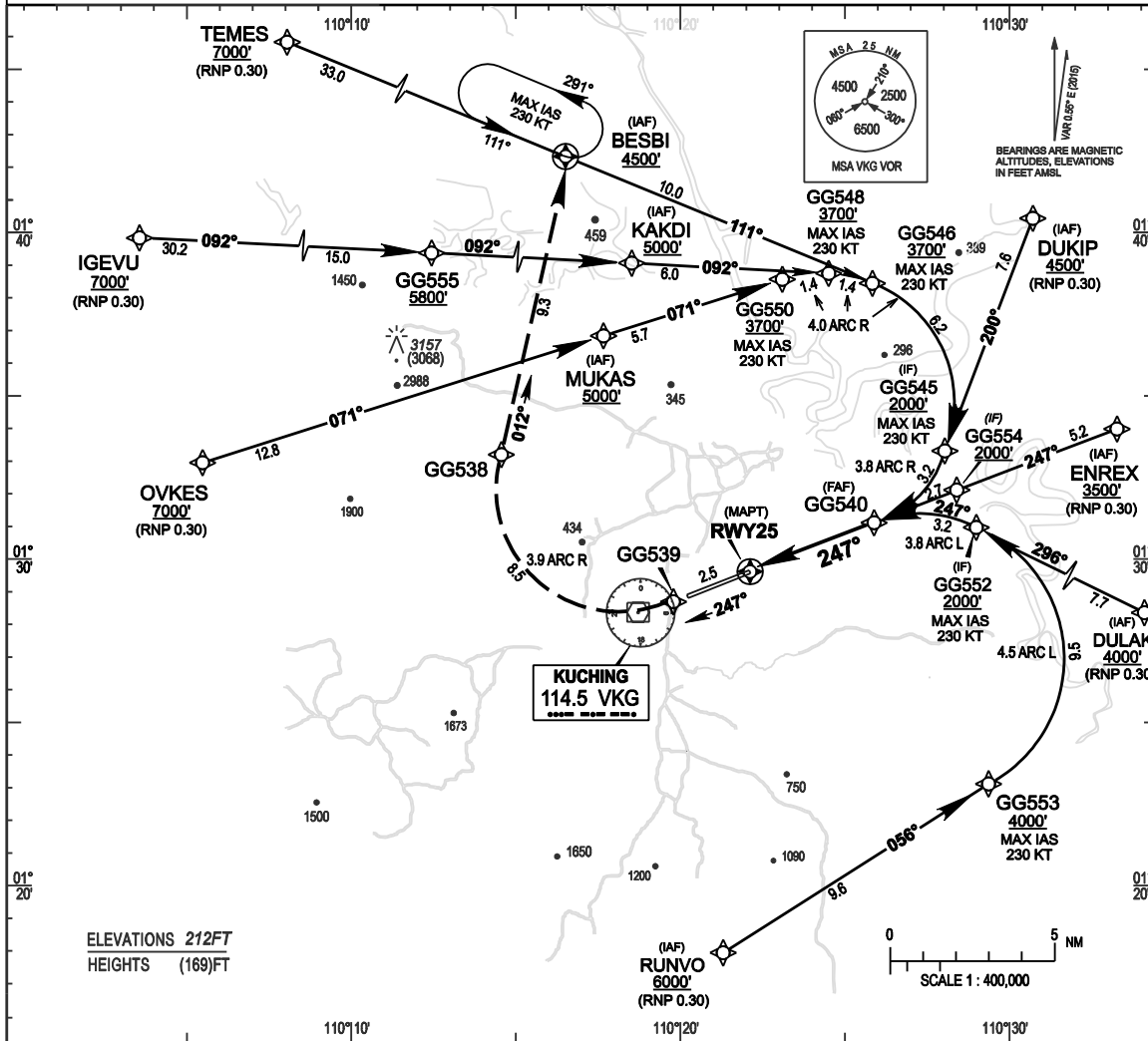
IF	VEGMU					<u>5500</u>			RNP 0.3
TF	GG450		248.07	7.36		<u>3000</u>			RNP 0.3
RF CENTER GG998 r= 5.00 NM	GG449			6.18	R	<u>2000</u>	200		RNP 0.3
RF CENTER GG999 r= 2.92 NM	GG445			3.32	R	<u>1300</u>	200		RNP 0.3

Final Approach and Missed Approach

IF	GG445					<u>1300</u>			RNP 0.3
TF	RWY07	Y	67.45	3.91		138		-2.80	RNP 0.3
TF	GG444		67.45	8.00		<u>2000</u>			RNP 1.0
RF CENTER GG993 r= 3.90 NM	GG443			13.92	R				RNP 1.0
TF	VEGMU	Y	271.91	3.08		<u>5000</u>			RNP 1.0
HM	VEGMU		248.07	1 MIN	L		230		RNP 1.0

AERODROME ELEV 89FT HEIGHTS RELATED TO THR RWY 25 - ELEV 43FT	TWR - 118.1 (P)	APP - 120.2 (P)	KUCHING (WBGG) RNAV (RNP) Z RWY25
	121.7 (S)	123.85 (S)	
	SMC - 121.9	ATIS - 128.4	

- AUTHORIZATION REQUIRED**
- DUAL GNSS IRU REQUIRED**
- RF REQUIRED**
- APPROACH NOT AUTHORIZED WHEN AIRPORT TEMPERATURE BELOW 0° OR ABOVE 69° C
- WBGG ALTIMETER SETTING REQUIRED
- PAPI AND VERTICAL PATH ANGLE NOT COINCIDENT.



OCA/H				
ACFT CAT.	A	B	C	D
RNP 0.3	340 (297)			

GND SPEED - KT	70	90	100	120	140	160
RATE OF DESC (2.8°) (FEET/MIN)	347	446	495	594	693	792

DISTANCE TO THR (NM)	4.1	3	2	1
ALTITUDE (FEET)	1300	900	600	340

KUCHING (WBGG) / KUCHING INTERNATIONAL AIRPORT MALAYSIA
RNAV (RNP) Z RWY 25

Aeronautical Data Tabulation

Fix / Point	COORDINATES	
VKG	01°28'48.08"N	110°20'03.90"E
DUKIP	01°40'26.03"N	110°30'42.59"E
ENREX	01°33'59.10"N	110°33'16.01"E
DULAK	01°27'27.62"N	110°35'50.74"E
IGEVU	01°41'25.35"N	109°33'25.93"E
OVKES	01°32'57.07"N	110°05'28.63"E
RUNVO	01°17'56.48"N	110°21'17.85"E
TEMES	01°54'55.41"N	109°46'06.73"E
GG538	01°33'11.82"N	110°14'33.52"E
GG539	01°28'41.47"N	110°19'47.29"E
GG540	01°31'06.83"N	110°25'53.13"E
GG545	01°33'18.64"N	110°28'02.18"E
GG546	01°38'26.59"N	110°25'49.89"E
BESBI	01°42'16.77"N	110°16'35.38"E
GG548	01°38'44.71"N	110°24'30.44"E
KAKDI	01°39'03.61"N	110°18'31.15"E
GG550	01°38'33.80"N	110°23'05.66"E
MUKAS	01°36'50.00"N	110°17'39.78"E
GG552	01°30'58.00"N	110°28'59.38"E
GG553	01°23'06.95"N	110°29'21.93"E
GG554	01°32'06.72"N	110°28'23.89"E
GG555	01°39'50.75"N	110°03'33.61"E
RWY25	01°29'36.82"N	110°22'06.61"E
RF Arc Centre Identifier	COORDINATES	
GG983	01°32'20.19"N	110°18'21.49"E
GG985	01°34'43.85"N	110°24'17.98"E
GG987	01°34'39.38"N	110°24'29.75"E
GG988	01°26'55.99"N	110°26'57.00"E
GG989	01°27'34.27"N	110°27'16.51"E

KUCHING (WBGG) / KUCHING INTERNATIONAL AIRPORT MALAYSIA
RNAV (RNP) Z RWY 25

Route Description

Path Terminator	Waypoint Identifier	Fly Over	Course/Track °M	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KTS)	VPA/TCH	Navigation Specification
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From TEMES to Final

IF	TEMES					<u>7000</u>			RNP 0.3
TF	BESBI		111.41	33.01		<u>4500</u>			RNP 0.3
TF	GG546		111.42	10.01		<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG545			6.15	R	<u>2000</u>	230		RNP 0.3
RF CENTER GG987 r= 3.79 NM	GG540			3.16	R	<u>1300</u>			RNP 0.3

From IGEVU to Final

IF	IGEVU					<u>7000</u>			RNP 0.3
TF	GG555		91.98	30.21		<u>5800</u>			RNP 0.3
TF	KAKDI		91.99	15.01		<u>5000</u>			RNP 0.3
TF	GG548		91.99	6.00		<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG546			1.37	R	<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG545			6.15	R	<u>2000</u>	230		RNP 0.3
RF CENTER GG987 r= 3.79 NM	GG540			3.16	R	<u>1300</u>			RNP 0.3

From OVKES to Final

IF	OVKES					<u>7000</u>			RNP 0.3
TF	MUKAS		71.43	12.80		<u>5000</u>			RNP 0.3
TF	GG550		71.44	5.70		<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG548			1.43	R	<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG546			1.37	R	<u>3700</u>	230		RNP 0.3
RF CENTER GG985 r= 4.00 NM	GG545			6.15	R	<u>2000</u>	230		RNP 0.3
RF CENTER GG987 r= 3.79 NM	GG540			3.16	R	<u>1300</u>			RNP 0.3

From RUNVO to Final

IF	RUNVO					<u>6000</u>			RNP 0.3
TF	GG553		56.49	9.58		<u>4000</u>	230		RNP 0.3
RF CENTER GG988 r= 4.50 NM	GG552			9.47	L	<u>2000</u>	230		RNP 0.3
RF CENTER GG989 r= 3.79 NM	GG540			3.21	L	<u>1300</u>			RNP 0.3

KUCHING (WBGG) / KUCHING INTERNATIONAL AIRPORT MALAYSIA
RNAV (RNP) Z RWY 25

Route Description

Path Terminator	Waypoint Identifier	Fly Over	Course/Track °M	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KTS)	VPA/TCH	Navigation Specification
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From DULAK to Final

IF	DULAK					<u>4000</u>			RNP 0.3
TF	GG552		295.94	7.70		<u>2000</u>	230		RNP 0.3
RF CENTER GG989 r= 3.79 NM	GG540			3.21	L	<u>1300</u>			RNP 0.3

From ENREX to Final

IF	ENREX					<u>3500</u>			RNP 0.3
TF	GG554		248.08	5.22		<u>2000</u>			RNP 0.3
TF	GG540		247.46	2.71		<u>1300</u>			RNP 0.3

From DUKIP to Final

IF	DUKIP					<u>4500</u>			RNP 0.3
TF	GG545		199.69	7.58		<u>2000</u>	230		RNP 0.3
RF CENTER GG987 r= 3.79 NM	GG540			3.16	R	<u>1300</u>			RNP 0.3

Final Approach and Missed Approach

IF	GG540					<u>1300</u>			RNP 0.3
TF	RWY25	Y	247.45	4.06		92		-2.80/50	RNP 0.3
TF	GG539		247.46	2.50					RNP 1.0
RF CENTER GG983 r= 3.90 NM	GG538			8.46	R				RNP 1.0
TF	BESBI	Y	11.68	9.26		<u>4500</u>			RNP 1.0
HM	BESBI		111.42	1 MIN	L		230		RNP 1.0

- END -