SPECIFICATIONS OF COMPRESSOR

Model No: LCC205LA04

Output : 12HP

Temporary

Sonyo Compressor (Dalian) Co.,Ltd.

22/Dec/23

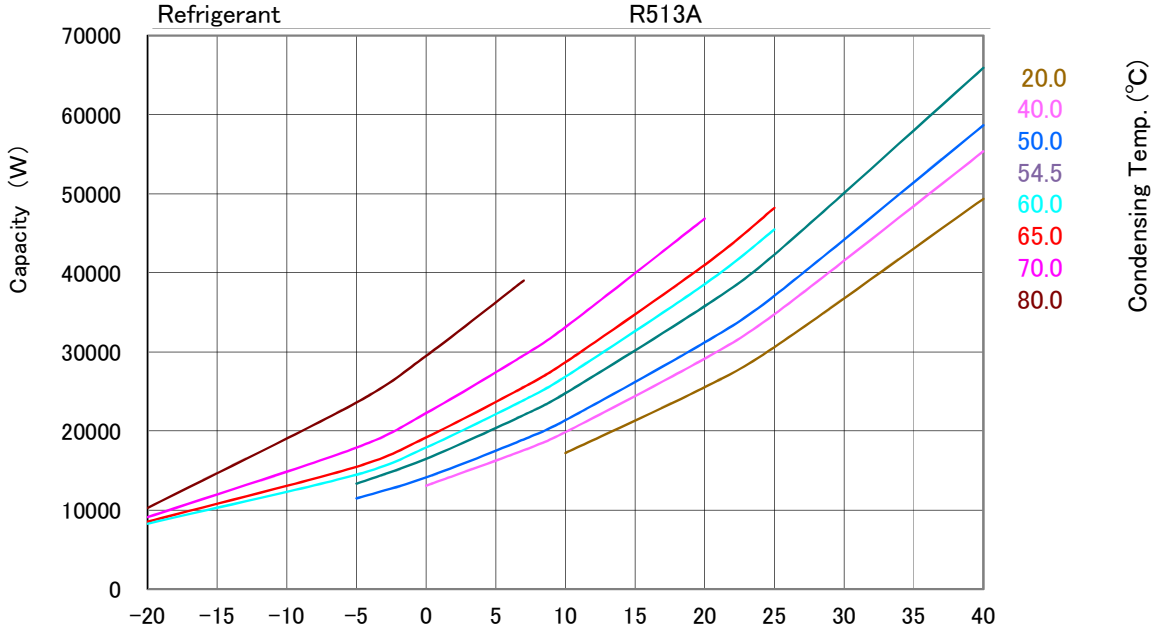
GENERAL SPECIFICATIONS

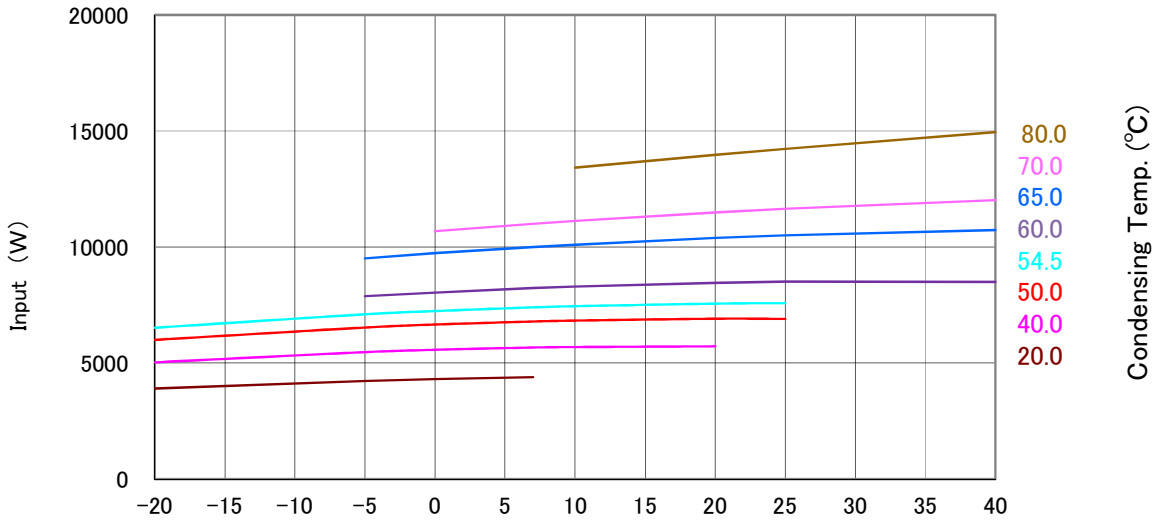
Model No:		LCC205LA04
Application		
Evaporating Temp Range	(℃)	-20 ～ 40
Refrigerant		R513A
Compressor Cooling		Natural Cooling
Rated Performance		
Capacity	(W)	23900/28350
Input	(W)	7400/9030
Current	(A)	13.2/13.6
Revolution	(min-1)	2900
Sound Level	(dB(A))	-
Rating Conditions		
Power Source		3-PH 50/60Hz 380,415/440,460V
Evaporating Temp	(℃)	7
Condensing Temp	(℃)	54.5
Suction Gas Temp	(℃)	18.5
Liquid Temp	(℃)	46
Ambient Temp	(℃)	35.0
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design		Hermetic Scroll
Displacement	(cm3)	205.0
Suction Line Connection	(Φmm 0D)	25.4
Discharge Line Connection	(Φmm 0D)	19.05
Oil	(mL)	2800(FV68S)
Mass(Incl.Oil)	(kg)	70
Motor		
Type		3-PH Induction Motor(3IR)
Pole		2
Rated Power Source		3-PH 50/60Hz 380,415/440,460V
Voltage Range	(V)	342～506
Starting Current	(A)	-

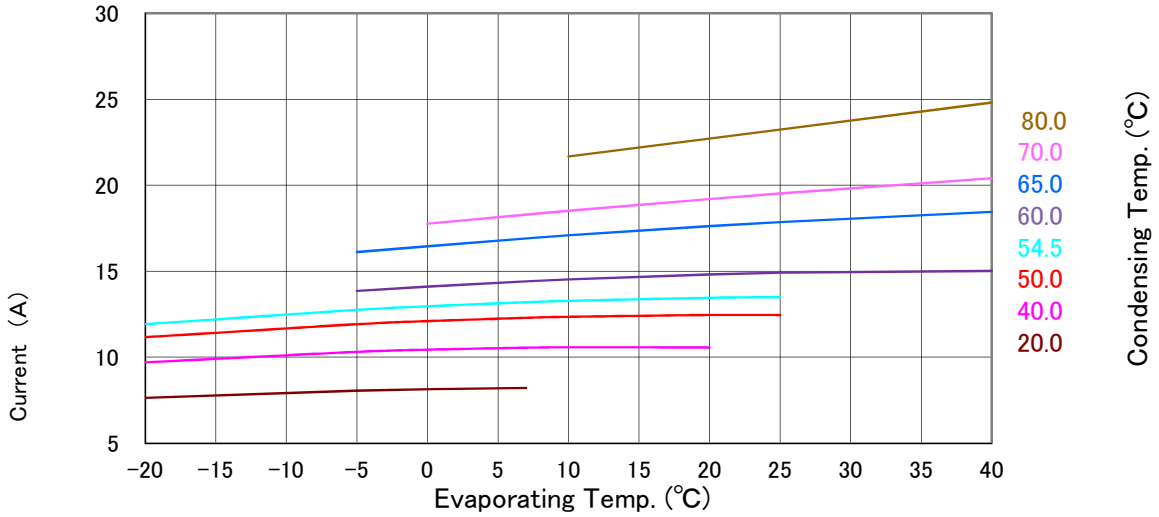
Sonyo Compressor (Dalian) Co.,Ltd.

PERFORMANCE CURVE

Code No.	LCC205LA04
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	20、40、50、54.5、60、70、75、85
Suction Gas Superheat(K)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R513A







PERFORMANCE DATA

Code No.	LCC205LA04
Power Source	3-PH 50Hz 380V
Condensing Temp.(℃)	20、40、50、54.5、60、70、75、85
Suction Gas Temp.(℃)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R513A

Capacity (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	10,270	23,600	29,510	39,020				
40.0	9,100	17,900	22,260	29,570	33,130	46,860		
50.0	8,530	15,480	19,190	25,550	28,700	41,010	48,210	
54.5	8,270	14,480	17,920	23,900	26,870	38,580	45,470	
60.0		13,340	16,480	22,010	24,780	35,790	42,310	65,910
70.0		11,480	14,130	18,930	21,370	31,210	37,100	58,660
75.0			13,090	17,570	19,860	29,160	34,760	55,350
85.0					17,220	25,540	30,600	49,350

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	3,900	4,230	4,310	4,390				
40.0	5,030	5,470	5,570	5,670	5,690	5,720		
50.0	6,000	6,530	6,660	6,790	6,830	6,910	6,900	
54.5	6,520	7,100	7,240	7,400	7,450	7,560	7,580	
60.0		7,880	8,040	8,230	8,300	8,460	8,510	8,500
70.0		9,510	9,730	10,000	10,100	10,390	10,510	10,730
75.0			10,680	11,000	11,120	11,490	11,650	12,020
85.0					13,420	13,970	14,230	14,950

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	7.6	8.1	8.2	8.2				
40.0	9.7	10.3	10.4	10.6	10.6	10.6		
50.0	11.2	11.9	12.1	12.3	12.4	12.5	12.5	
54.5	11.9	12.8	13.0	13.2	13.3	13.5	13.5	
60.0		13.9	14.1	14.4	14.5	14.8	14.9	15.0
70.0		16.1	16.5	16.9	17.1	17.6	17.9	18.5
75.0			17.8	18.3	18.5	19.2	19.5	20.4
85.0					21.7	22.7	23.2	24.8

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	261	481	573	717				
40.0	251	460	550	694	761	1,013		
50.0	246	450	539	682	750	1,003	1,145	
54.5	244	446	534	677	745	998	1,141	
60.0		440	529	671	738	993	1,137	1,634
70.0		431	518	660	727	983	1,128	1,632
75.0			513	654	722	978	1,124	1,631
85.0					711	968	1,115	1,628

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	2.63	5.58	6.85	8.89				
40.0	1.81	3.27	4.00	5.22	5.82	8.19		
50.0	1.42	2.37	2.88	3.76	4.20	5.93	6.99	
54.5	1.27	2.04	2.48	3.23	3.61	5.10	6.00	
60.0		1.69	2.05	2.67	2.99	4.23	4.97	7.75
70.0		1.21	1.45	1.89	2.12	3.00	3.53	5.47
75.0			1.23	1.60	1.79	2.54	2.98	4.60
85.0					1.28	1.83	2.15	3.30

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	5.049974E+04	2.692491E+03	4.032051E+00	6.371270E+02
C2	2.436936E+03	2.307601E+01	2.220932E-02	2.117483E+01
C3	-8.806136E+02	2.536729E+01	1.194756E-01	-2.444690E+00
C4	7.080608E+00	-8.033226E-01	-1.455000E-03	-1.680075E-02
C5	-4.582683E+01	-6.339308E-01	-8.242109E-04	-1.180179E-02
C6	5.155198E+00	1.076283E+00	8.358915E-04	1.053703E-02
C7	1.342414E-01	9.702295E-03	1.311224E-05	2.803054E-03
C8	4.534934E-02	-1.858695E-03	3.862660E-06	1.986444E-03
C9	2.749842E-01	1.412626E-02	2.289628E-05	-1.472518E-04
C10	-1.030909E-05	1.012640E-06	2.102619E-09	-1.967447E-08

Note:The polynomial coefficients subject to change without notice.

$X=C1+C2*(S)+C3*D+C4*(S^2)+C5*(S*D)+C6*(D^2)+C7*(S^3)+C8*(D*S^2)+C9*(S*D^2)+C10*(D^3)$

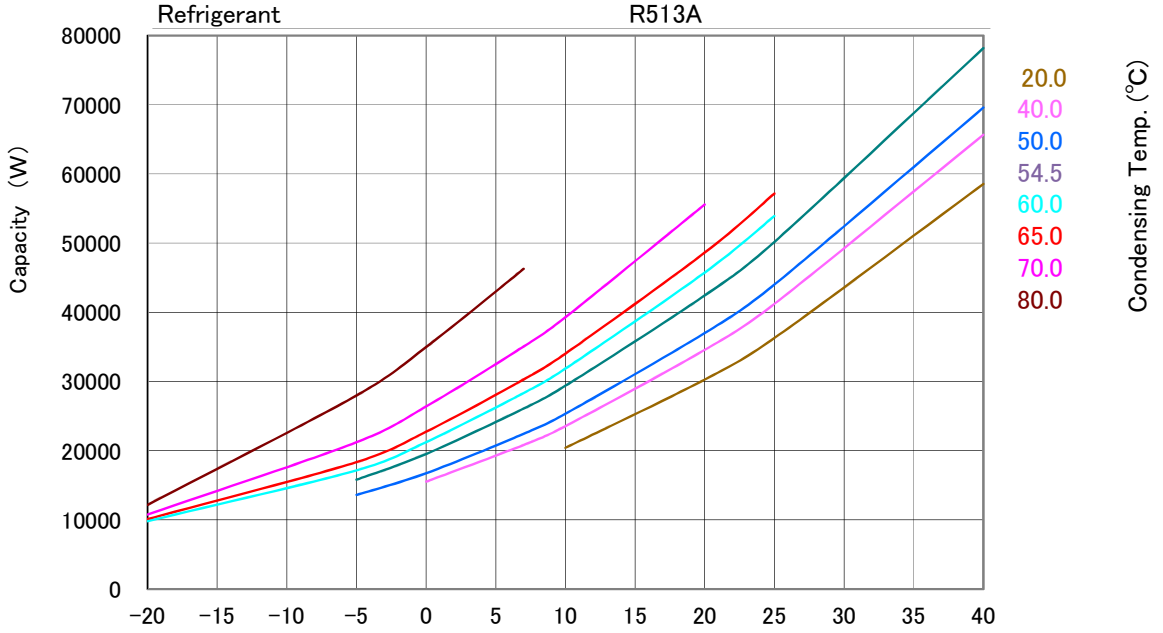
X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

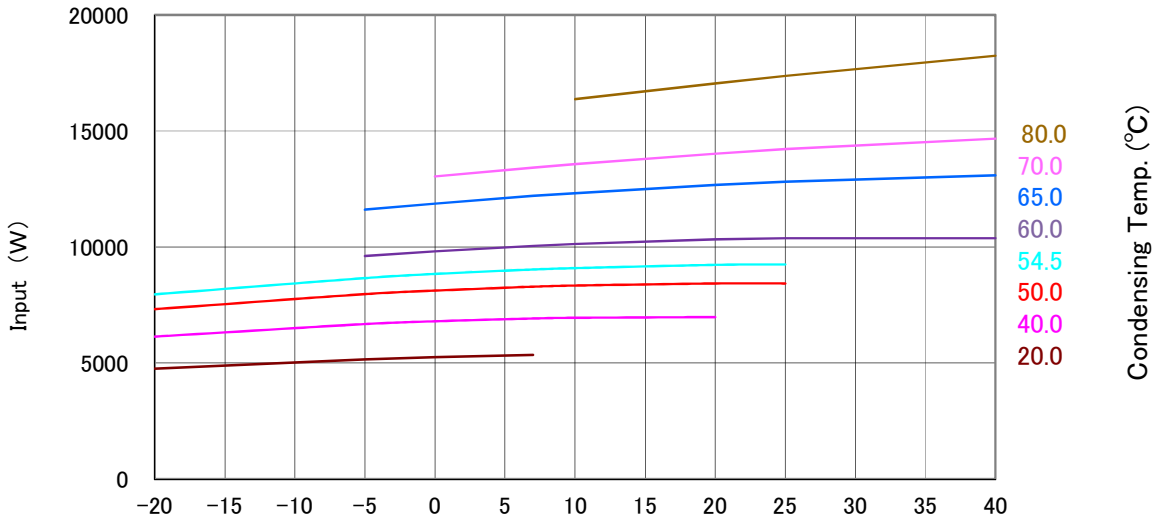
S——EVAPORATING TEMP, °C

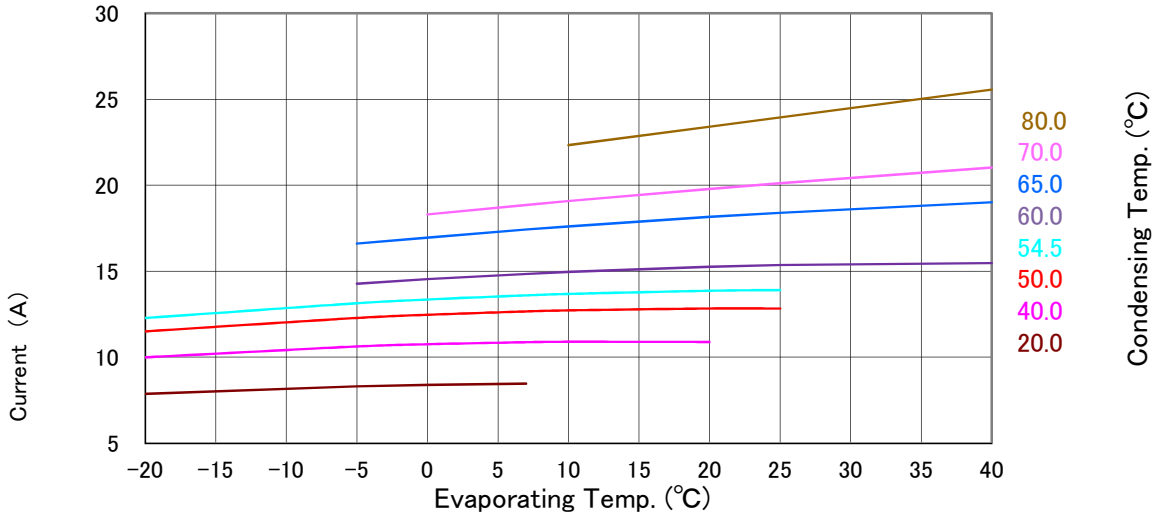
D——CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	LCC205LA04
Power Source	3-PH 60Hz 440V
Condensing Temp.(℃)	20、40、50、54.5、60、70、75、85
Suction Gas Superheat(K)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R513A







PERFORMANCE DATA

Code No.	LCC205LA04
Power Source	3-PH 60Hz 440V
Condensing Temp.(℃)	20、40、50、54.5、60、70、75、85
Suction Gas Temp.(℃)	11.5
Sub Cooled(K)	8.5
Compressor Cooling	Natural Cooling
Refrigerant	R513A

Capacity (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	12,180	27,990	35,010	46,280				
40.0	10,790	21,230	26,410	35,080	39,300	55,590		
50.0	10,120	18,360	22,760	30,310	34,050	48,640	57,180	
54.5	9,820	17,170	21,260	28,350	31,880	45,760	53,930	
60.0		15,820	19,540	26,100	29,400	42,450	50,180	78,180
70.0		13,620	16,760	22,450	25,350	37,020	44,010	69,590
75.0			15,530	20,840	23,560	34,590	41,230	65,660
85.0					20,430	30,290	36,290	58,540

Input (W)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	4,760	5,160	5,260	5,350				
40.0	6,140	6,680	6,800	6,920	6,950	6,980		
50.0	7,320	7,970	8,120	8,290	8,340	8,430	8,430	
54.5	7,960	8,660	8,840	9,030	9,090	9,230	9,250	
60.0		9,610	9,810	10,050	10,130	10,330	10,380	10,380
70.0		11,610	11,870	12,200	12,320	12,680	12,820	13,090
75.0			13,040	13,420	13,570	14,020	14,220	14,670
85.0					16,370	17,050	17,370	18,240

Current (A)

Condensing Temp. (℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	7.9	8.3	8.4	8.5				
40.0	10.0	10.6	10.8	10.9	10.9	10.9		
50.0	11.5	12.3	12.5	12.7	12.7	12.8	12.8	
54.5	12.3	13.1	13.4	13.6	13.7	13.9	13.9	
60.0		14.3	14.5	14.8	15.0	15.3	15.4	15.5
70.0		16.6	17.0	17.4	17.6	18.2	18.4	19.0
75.0			18.3	18.9	19.1	19.8	20.1	21.0
85.0					22.3	23.4	23.9	25.6

PERFORMANCE DATA

MassFlow(kg/H)

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	311	572	681	853				
40.0	299	547	654	825	905	1,204		
50.0	293	535	641	811	891	1,192	1,362	
54.5	291	530	635	805	885	1,187	1,357	
60.0		523	628	798	878	1,180	1,351	1,943
70.0		512	616	785	865	1,169	1,341	1,941
75.0			610	778	858	1,163	1,336	1,939
85.0					846	1,151	1,326	1,936

COP

Condensing Temp.(℃) \ Evaporating Temp. (℃)	-20	-5	0	7	10	20	25	40
20.0	2.56	5.42	6.66	8.65				
40.0	1.76	3.18	3.88	5.07	5.65	7.96		
50.0	1.38	2.30	2.80	3.66	4.08	5.77	6.78	
54.5	1.23	1.98	2.40	3.14	3.51	4.96	5.83	
60.0		1.65	1.99	2.60	2.90	4.11	4.83	7.53
70.0		1.17	1.41	1.84	2.06	2.92	3.43	5.32
75.0			1.19	1.55	1.74	2.47	2.90	4.48
85.0					1.25	1.78	2.09	3.21

Coefficients of Polynominal Formula

	Capacity (W)	Input (W)	Current (A)	MassFlow(kg/H)
C1	5.990112E+04	3.278004E+03	4.153478E+00	7.577692E+02
C2	2.891638E+03	2.672372E+01	2.292163E-02	2.522389E+01
C3	-1.044498E+03	3.127771E+01	1.231255E-01	-2.916539E+00
C4	8.391928E+00	-9.830549E-01	-1.498877E-03	-1.628768E-02
C5	-5.439563E+01	-7.233057E-01	-8.507546E-04	-1.684623E-02
C6	6.114050E+00	1.310474E+00	8.609534E-04	1.260041E-02
C7	1.590820E-01	1.213860E-02	1.350504E-05	3.290035E-03
C8	5.387794E-02	-2.318312E-03	3.976631E-06	2.314715E-03
C9	3.265185E-01	1.680513E-02	2.360500E-05	-1.418741E-04
C10	-1.222233E-05	1.256193E-06	2.175252E-09	-2.391272E-08

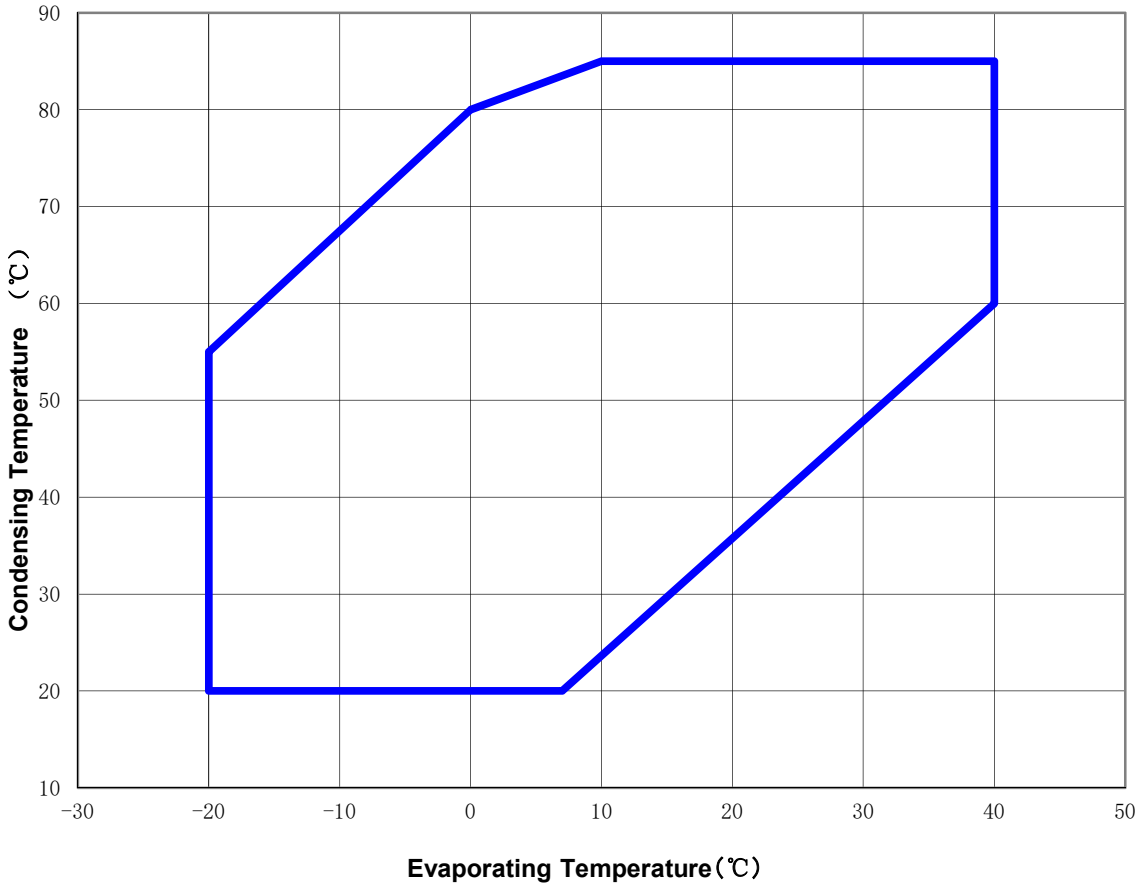
Note:The polynomial coefficients subject to change without notice.

$X=C1+C2*(S)+C3*D+C4*(S^2)+C5*(S*D)+C6*(D^2)+C7*(S^3)+C8*(D*S^2)+C9*(S*D^2)+C10*(D^3)$

X——CAPACITY(W) OR POWER(W) OR CURRENT(A)

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

Operating Envelope

Refrigerant: R513A