SPECIFICATIONS OF COMPRESSOR

Model No: 9CE051LA04

Output : 4.5 HP

Temporary

Sonyo Compressor (Dalian) Co., Ltd.

19-Jun-24

GENERAL SPECIFICATIONS

Model No:		9CE051LA04
Application		
Evaporating Temp Range	(℃)	-25.0 ～ 27.0
Refrigerant		R32
Compressor Cooling		Natural Cooling
Rated Performance		
Capacity	(W)	14000/16870
Input	(W)	4600/5440
Current	(A)	8.1/9.7
Revolution	(min^{-1})	2900/3450
Sound Level	(dB(A))	
Rating Conditions		
Power Source		3-PH 50Hz 380V/3-PH 60Hz 440V
Evaporating Temp	(℃)	7.2
Condensing Temp	(℃)	54.4
Suction Gas Temp	(℃)	18.3
Liquid Temp	(℃)	46.1
Ambient Temp	(℃)	35.0
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design		Hermetic Scroll
Displacement	(cm3)	51.6
Suction Line Connection	(Φmm 0D)	22.22
Discharge Line Connection	(Φmm 0D)	12.7
Oil	(ml)	1700 (FW68S)
Mass(Incl.Oil)	(kg)	
Motor		
Type		3-PH Induction Motor(3IR)
Pole		2
Rated Power Source		3-PH 50Hz 380-400V/ 3PH 60Hz 440-460V
Voltage Range	(V)	342～440V/ 396V～506V
Starting Current	(A)	

Sonyo Compressor (Dalian) Co., Ltd.

PERFORMANCE DATA

Compressor Model	**9CE051LA04**
Power Source	**3PH 50Hz 380-400V**
Suction Gas Superheat(℃)	**11.1**
Sub Cooling(℃)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R32**

CAPACITY(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	7,540	9,160	10,410	13,500	16,010	17,850	19,900	24,160
40.5	7,170	8,670	9,830	12,680	14,990	16,670	18,540	22,420
45.0	6,880	8,290	9,380	12,040	14,190	15,760	17,490	21,080
50.0	6,570	7,880	8,900	11,370	13,350	14,800	16,390	19,690
54.4		7,540	8,490	10,810	12,660	14,000	15,480	18,530
60.0			8,010	10,130	11,830	13,050	14,400	17,170
65.0				9,570	11,130	12,260	13,500	16,040

POWER(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	2,950	3,000	3,020	3,020	2,980	2,950	2,900	2,800
40.5	3,250	3,330	3,360	3,380	3,360	3,330	3,290	3,190
45.0	3,530	3,630	3,670	3,720	3,710	3,690	3,660	3,580
50.0	3,870	3,990	4,060	4,140	4,150	4,150	4,130	4,080
54.4		4,350	4,430	4,550	4,590	4,600	4,600	4,580
60.0			4,950	5,120	5,200	5,240	5,260	5,290
65.0				5,690	5,810	5,870	5,920	5,990

CURRENT(A) @380V

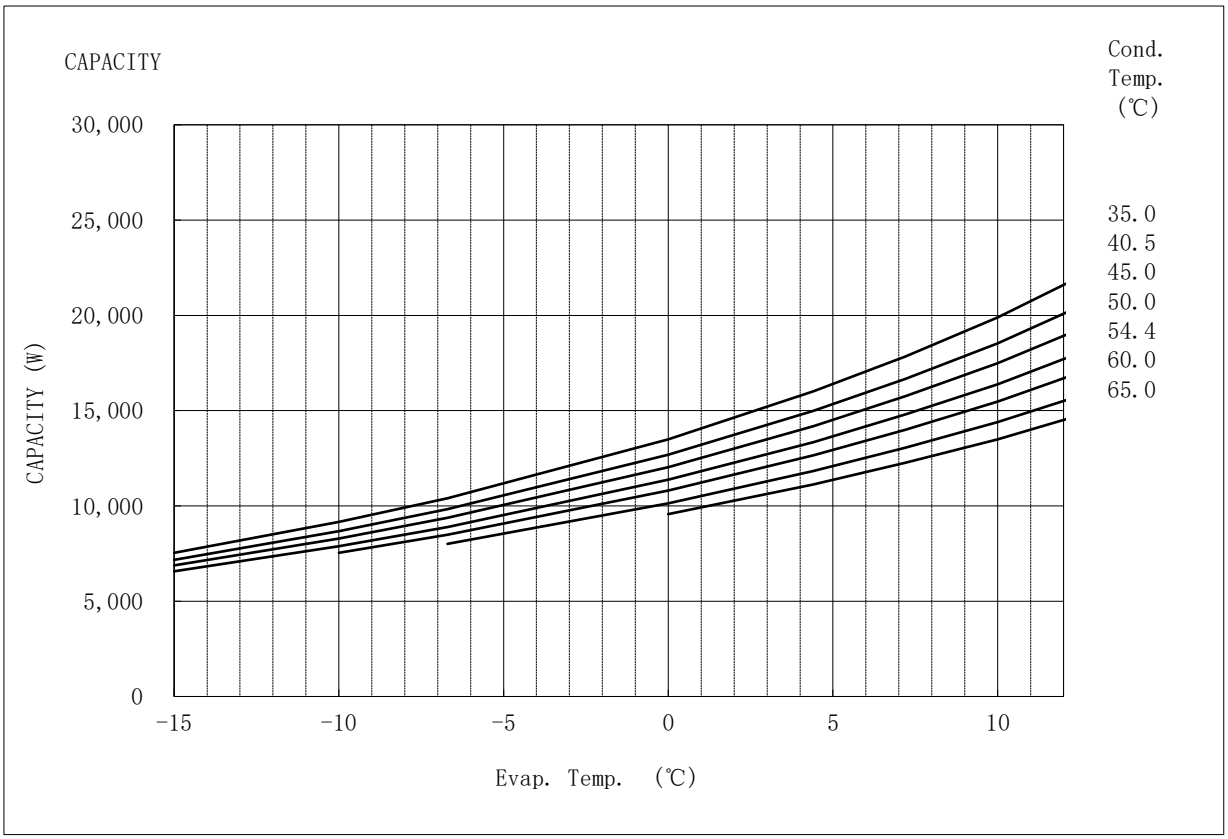
Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	5.9	6.0	6.0	6.0	5.9	5.9	5.8	5.7
40.5	6.3	6.4	6.5	6.5	6.5	6.4	6.4	6.3
45.0	6.6	6.8	6.9	6.9	6.9	6.9	6.9	6.8
50.0	7.0	7.2	7.3	7.5	7.5	7.5	7.5	7.4
54.4		7.6	7.8	8.0	8.1	8.1	8.1	8.1
60.0			8.4	8.7	8.8	8.9	8.9	8.9
65.0				9.4	9.6	9.7	9.7	9.8

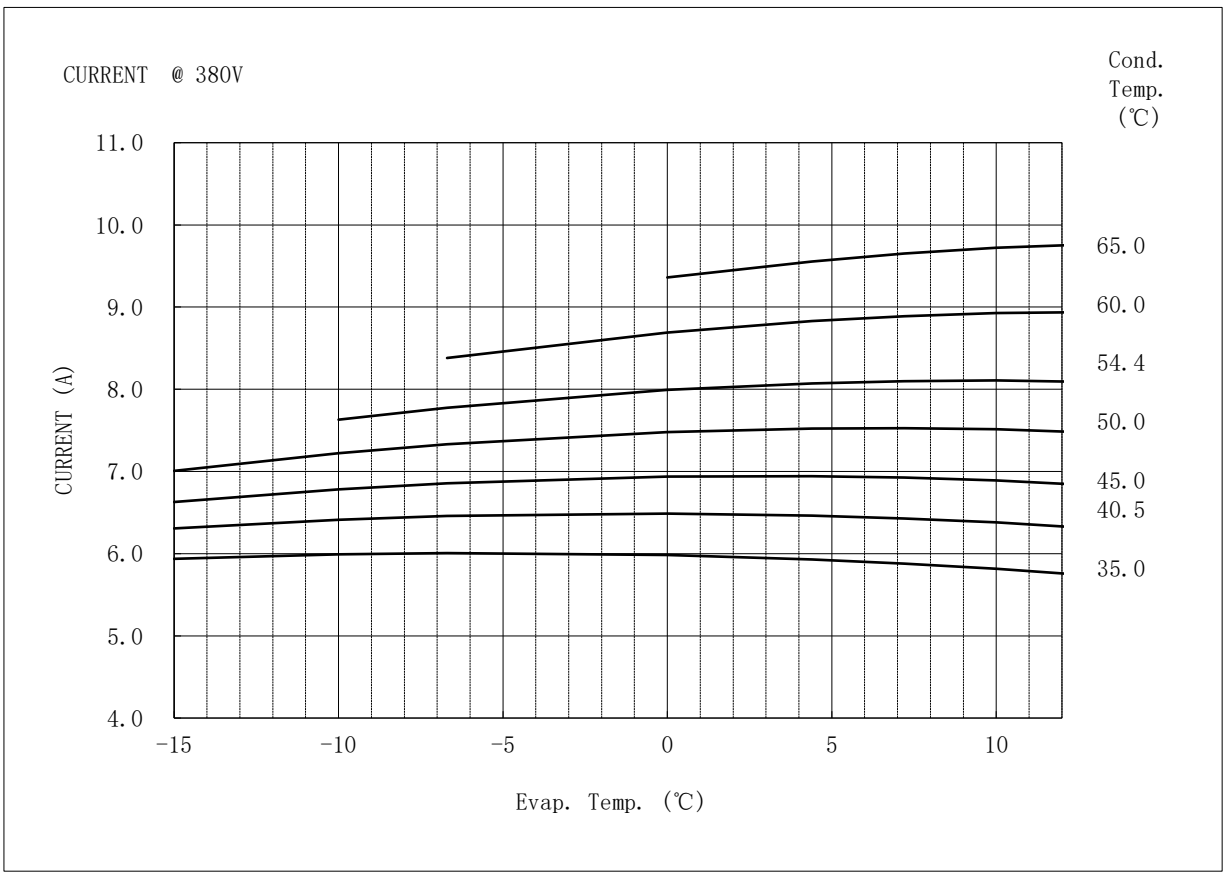
FLOW (kg/h) @380V

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	78.8	114.7	138.6	187.4	219.7	240.3	261.0	298.2
40.5	83.5	114.4	135.7	180.7	211.7	232.0	252.8	291.0
45.0	87.5	114.3	133.4	175.3	205.3	225.3	246.1	285.2
50.0	92.1	114.4	131.0	169.5	198.3	218.1	239.0	279.0
54.4		114.5	129.0	164.6	192.4	211.9	232.8	273.8
60.0			126.6	158.5	185.0	204.2	225.2	267.3
65.0				153.1	178.6	197.5	218.6	261.7

Compressor Model(Code) **9CE051LA04**

Power Source **3PH 50Hz 380-400V**





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model	**9CE051LA04**
Power Source	**3PH 50Hz 380-400V**
Suction Gas Superheat (K)	**11.1**
Sub Cooling (K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R32**

X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)

X——CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

380V-50Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
C1	1.975240E+04	2.120384E+03	3.993754E+00	2.347476E+02
C2	9.084018E+02	1.326320E+01	-1.379580E-02	9.934557E+00
C3	-2.052850E+02	-8.352887E+00	2.687750E-02	-1.466254E+00
C4	1.667985E+01	-6.039315E-01	-2.011195E-05	-1.502843E-01
C5	-1.316295E+01	-1.455621E+00	-8.462003E-04	-7.667720E-02
C6	7.511248E-01	9.732171E-01	8.567473E-04	3.242993E-03
C7	1.106340E-01	1.318755E-03	3.294818E-08	8.904514E-07
C8	-1.781412E-01	-2.087648E-03	-2.208151E-05	4.430252E-03
C9	6.542102E-02	2.651376E-02	2.828857E-05	5.225732E-05
C10	-3.709263E-08	-3.156427E-09	3.171692E-12	1.865619E-11

Note:The polynomial coefficients subject to change without notice.

PERFORMANCE DATA

Compressor Model	**9CE051LA04**
Power Source	**3PH 60Hz 440-460V**
Suction Gas Superheat(℃)	**11.1**
Sub Cooling(℃)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R32**

CAPACITY(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	9,090	11,040	12,550	16,270	19,300	21,510	23,980	29,110
40.5	8,640	10,450	11,850	15,280	18,060	20,090	22,340	27,010
45.0	8,290	9,990	11,300	14,510	17,100	18,990	21,080	25,400
50.0	7,910	9,500	10,720	13,700	16,090	17,830	19,760	23,720
54.4		9,090	10,230	13,020	15,260	16,870	18,660	22,340
60.0			9,650	12,210	14,250	15,730	17,350	20,690
65.0				11,530	13,420	14,780	16,270	19,330

POWER(W)

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	3,490	3,550	3,580	3,570	3,530	3,490	3,430	3,310
40.5	3,840	3,940	3,970	4,000	3,970	3,940	3,890	3,780
45.0	4,170	4,290	4,340	4,390	4,390	4,370	4,330	4,240
50.0	4,580	4,720	4,800	4,890	4,910	4,910	4,890	4,830
54.4		5,140	5,240	5,380	5,430	5,440	5,440	5,410
60.0			5,850	6,060	6,150	6,190	6,230	6,250
65.0				6,720	6,870	6,940	7,000	7,090

CURRENT(A) @440V

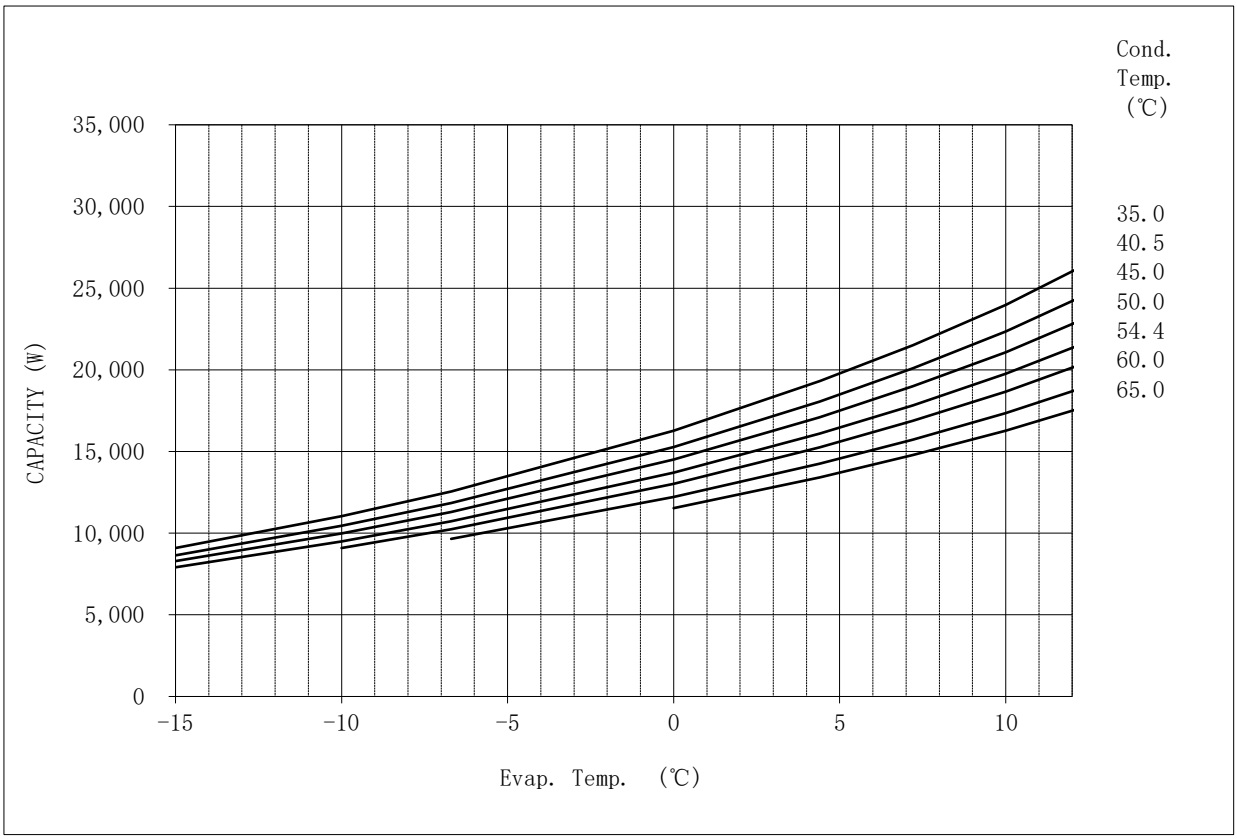
Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	7.1	7.2	7.2	7.2	7.1	7.0	7.0	6.8
40.5	7.6	7.7	7.7	7.8	7.7	7.7	7.6	7.5
45.0	7.9	8.1	8.2	8.3	8.3	8.3	8.3	8.1
50.0	8.4	8.6	8.8	9.0	9.0	9.0	9.0	8.9
54.4		9.1	9.3	9.6	9.7	9.7	9.7	9.7
60.0			10.0	10.4	10.6	10.6	10.7	10.7
65.0				11.2	11.4	11.6	11.6	11.7

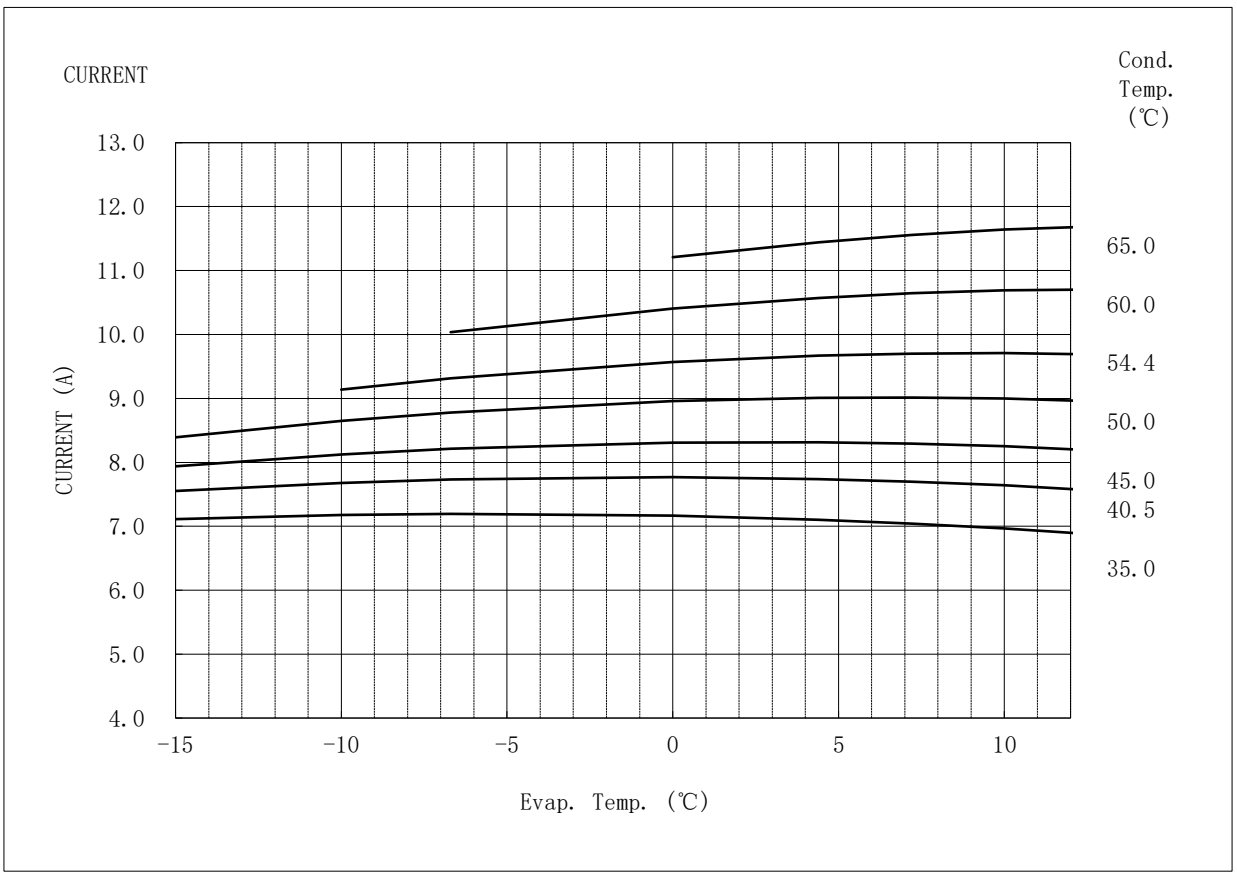
FLOW (kg/h) @440V

Condensing	Evaporating Temperature(℃)							
Temperature(℃)	-15	-10	-6.7	0	4.4	7.2	10	15
35.0	94.5	137.6	166.3	224.8	263.6	288.4	313.2	357.9
40.5	100.2	137.3	162.8	216.8	254.0	278.4	303.3	349.2
45.0	105.1	137.2	160.1	210.4	246.3	270.4	295.4	342.3
50.0	110.5	137.2	157.2	203.5	238.0	261.7	286.8	334.9
54.4		137.4	154.8	197.5	230.9	254.3	279.4	328.5
60.0			152.0	190.1	222.0	245.0	270.3	320.7
65.0				183.8	214.3	237.0	262.3	314.0

Compressor Model(Code) **9CE051LA04**

Power Source **3PH 60Hz 440-460V**





COEFFICIENTS OF PERFORMANCE CURVES

Compressor Model	**9CE051LA04**
Power Source	**3PH 60Hz 440-460V**
Suction Gas Superheat (K)	**11.1**
Sub Cooling (K)	**8.3**
Compressor Cooling	**Natural Cooling**
Refrigerant	**R32**

X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)

X——CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S——EVAPORATING TEMP, °C

D——CONDENSING TEMP, °C

440V-60Hz	CAPACITY (W)	POWER (W)	CURRENT (A)	FLOW (kg/h)
C1	2.383538E+04	2.520141E+03	4.783821E+00	2.813143E+02
C2	1.091662E+03	1.402085E+01	-1.659467E-02	1.193030E+01
C3	-2.486279E+02	-1.026856E+01	3.213790E-02	-1.745747E+00
C4	2.004621E+01	-7.385991E-01	-2.559618E-05	-1.795141E-01
C5	-1.574311E+01	-1.644742E+00	-1.009881E-03	-9.224235E-02
C6	9.169610E-01	1.153398E+00	1.026467E-03	3.773235E-03
C7	1.326926E-01	1.187954E-03	2.938896E-08	1.220958E-06
C8	-2.136910E-01	-1.838716E-03	-2.640792E-05	5.300716E-03
C9	7.773968E-02	3.057773E-02	3.383736E-05	6.381283E-05
C10	-4.234358E-08	-1.004160E-08	1.765591E-12	8.938716E-11

Note:The polynomial coefficients subject to change without notice.