

## SMD POWER INDUCTORS / ASPI WE Type Series

### • Features

1. Magnetic Shielded surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.

### • Applications

Excellent for power line DC-DC conversion applications used in hard disk, notebook computers , LED lighting , Industries and other electronic equipment etc.



### • Shape & Dimensions

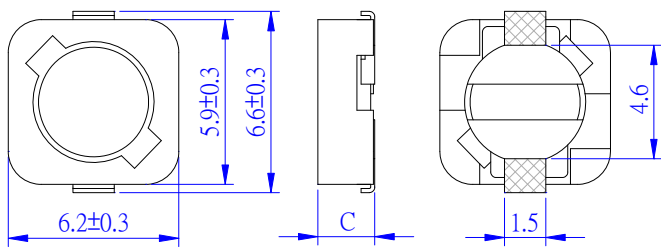


Fig.1

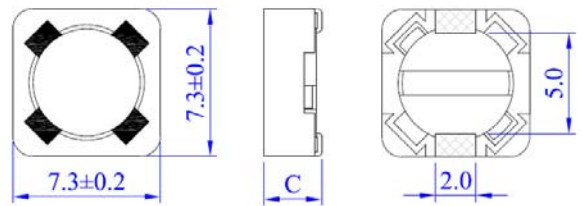


Fig.2

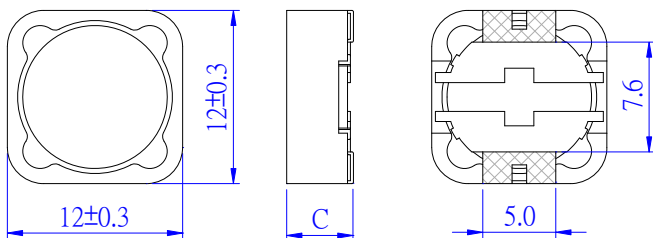
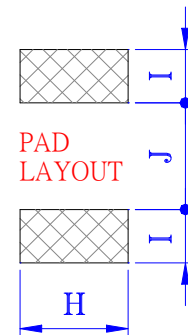


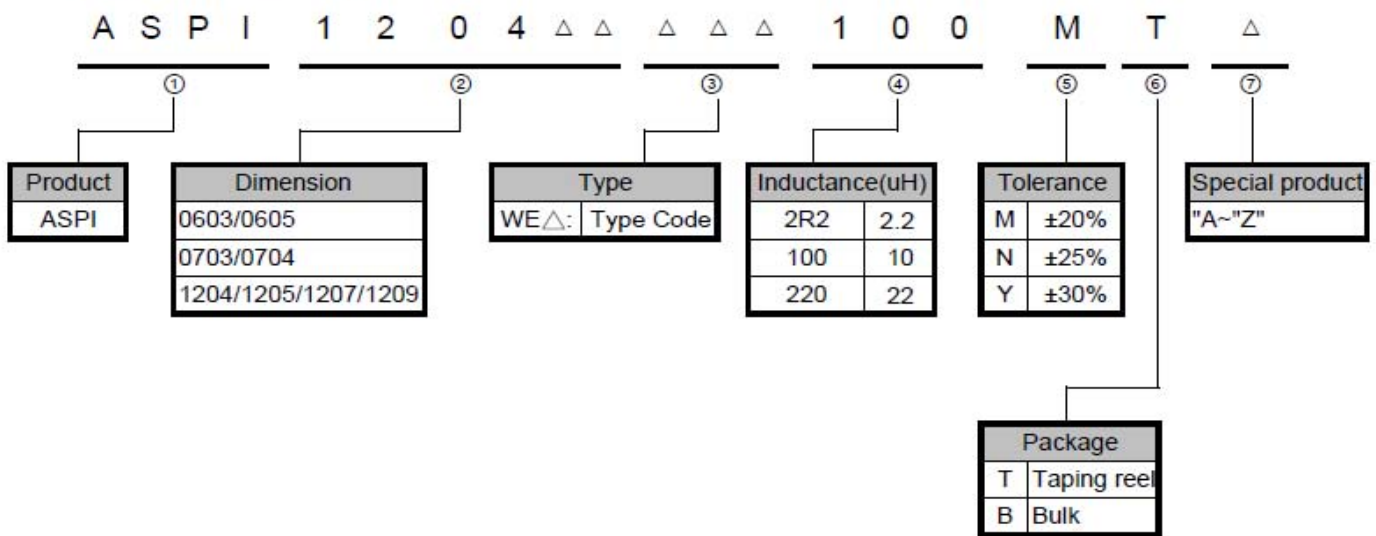
Fig.3



## SMD POWER INDUCTORS / ASPI WE Type Series

TYPE	Figure	C (mm)	H (Ref.)	I (Ref.)	J (Ref.)
ASPI0603WE	1	3.0 MAX.	1.9	1.4	4.6
ASPI0605WE	1	5.0 MAX.	1.9	1.4	4.6
ASPI0703WE	2	3.4 MAX.	2.2	1.6	4.8
ASPI0704WE	2	5.0 MAX.	2.2	1.6	4.8
ASPI1204WE	3	4.5 MAX.	5.4	2.9	7.0
ASPI1205WE	3	6.0 MAX.	5.4	2.9	7.0
ASPI1207WE	3	8.0 MAX.	5.4	2.9	7.0
ASPI1209WE	3	10.0 MAX.	5.4	2.9	7.0

### ■ PRODUCT IDENTIFICATION



## ◆ASPI0603WE Series Specification :

Part Number	Inductance (uH)	Inductance Tolerance	Test Freq. (KHz)	DCR (mΩ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI0603WE1R0□T	1.0	Y	100	39	4.50	3.50
ASPI0603WE2R2□T	2.2	Y	100	54	3.30	2.90
ASPI0603WE3R3□T	3.3	Y	100	67	3.00	2.80
ASPI0603WE4R7□T	4.7	Y	100	78	2.50	2.65
ASPI0603WE6R8□T	6.8	M,N	100	100	2.00	2.30
ASPI0603WE100□T	10	M,N	100	125	1.60	1.90
ASPI0603WE150□T	15	M,N	100	200	1.40	1.60
ASPI0603WE220□T	22	M,N	100	250	1.10	1.35
ASPI0603WE270□T	27	M,N	100	360	1.00	0.90
ASPI0603WE330□T	33	M,N	100	400	0.90	0.85
ASPI0603WE470□T	47	M,N	100	600	0.74	0.85
ASPI0603WE101□T	100	M,N	100	1060	0.50	0.65

### NOTE :

\* The operating temperature range is -40°C to +125°C (Including self-temperature rise)

\* □ Tolerance M : ±20% , N : ±25% , Y:±30%

\*Isat:For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^\circ\text{C}$  . (Ta=20°C)

## ◆ASPI0605WE Series Specification :

Part Number	Inductance (uH)	Inductance Tolerance	Test Freq. (KHz)	DCR (mΩ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI0605WE1R0□T	1.0	Y	100	34	5.50	5.00
ASPI0605WE2R2□T	2.2	Y	100	49	4.00	3.50
ASPI0605WE4R7□T	4.7	Y	100	65	2.80	2.80
ASPI0605WE6R8□T	6.8	M,N	100	75	2.30	2.50
ASPI0605WE8R2□T	8.2	M,N	100	80	2.10	2.30
ASPI0605WE100□T	10	M,N	100	88	1.80	2.10
ASPI0605WE220□T	22	M,N	100	115	1.30	2.00
ASPI0605WE470□T	47	M,N	100	298	0.80	1.40

### NOTE :

\* The operating temperature range is -40°C to +125°C (Including self-temperature rise)

\* □ Tolerance M : ±20% , N : ±25% , Y:±30%

\*Isat:For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^\circ\text{C}$  . (Ta=20°C)

## ◆ASPI0703WE Series Specification :

Part Number	Inductance ( $\mu$ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ( $m\Omega$ ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI0703WER54□T	0.54	Y	1.0	8.5	9.00	5.60
ASPI0703WE1R0□T	1.0	Y	1.0	12.0	6.40	5.37
ASPI0703WE2R2□T	2.2	Y	1.0	20.0	4.80	4.02
ASPI0703WE3R3□T	3.3	Y	1.0	32.5	4.10	3.10
ASPI0703WE4R7□T	4.7	Y	1.0	60.0	4.20	2.32
ASPI0703WE100□T	10	M,N	1.0	72.0	2.20	1.83
ASPI0703WE120□T	12	M,N	1.0	98.0	2.15	1.73
ASPI0703WE150□T	15	M,N	1.0	130.0	1.75	1.51
ASPI0703WE180□T	18	M,N	1.0	140.0	1.70	1.41
ASPI0703WE220□T	22	M,N	1.0	190.0	1.40	1.38
ASPI0703WE270□T	27	M,N	1.0	210.0	1.30	1.27
ASPI0703WE330□T	33	M,N	1.0	240.0	1.15	1.22
ASPI0703WE390□T	39	M,N	1.0	320.0	1.10	1.03
ASPI0703WE470□T	47	M,N	1.0	360.0	1.00	0.85
ASPI0703WE560□T	56	M,N	1.0	470.0	0.88	0.84
ASPI0703WE680□T	68	M,N	1.0	520.0	0.84	0.74
ASPI0703WE820□T	82	M,N	1.0	690.0	0.78	0.69
ASPI0703WE101□T	100	M,N	1.0	790.0	0.76	0.62
ASPI0703WE121□T	120	M,N	1.0	890.0	0.68	0.60
ASPI0703WE151□T	150	M,N	1.0	1270.0	0.53	0.56
ASPI0703WE181□T	180	M,N	1.0	1450.0	0.50	0.49
ASPI0703WE221□T	220	M,N	1.0	1650.0	0.42	0.43
ASPI0703WE271□T	270	M,N	1.0	2310.0	0.39	0.40
ASPI0703WE331□T	330	M,N	1.0	2620.0	0.35	0.32
ASPI0703WE391□T	390	M,N	1.0	2940.0	0.34	0.30
ASPI0703WE471□T	470	M,N	1.0	4180.0	0.31	0.30
ASPI0703WE561□T	560	M,N	1.0	4670.0	0.30	0.27
ASPI0703WE681□T	680	M,N	1.0	5730.0	0.22	0.22
ASPI0703WE821□T	820	M,N	1.0	6500.0	0.20	0.21
ASPI0703WE102□T	1000	M,N	1.0	9440.0	0.18	0.20

### NOTE :

\* The operating temperature range is  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (Including self-temperature rise)

\* □ Tolerance M :  $\pm 20\%$  , N :  $\pm 25\%$  , Y:  $\pm 30\%$

\* Isat: For Inductance drop 10% from its value without current.

\* Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^{\circ}\text{C}$  . ( $T_a = 20^{\circ}\text{C}$ )

## ◆ASPI0704WE Series Specification :

Part Number	Inductance (uH)	Inductance Tolerance	Test Freq. (KHz)	DCR (mΩ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI0704WE1R0□T	1.0	Y	1.0	10	10.20	6.84
ASPI0704WE2R2□T	2.2	Y	1.0	20	6.50	6.00
ASPI0704WE3R3□T	3.3	Y	1.0	30	4.60	5.00
ASPI0704WE4R7□T	4.7	Y	1.0	40	4.00	4.00
ASPI0704WE100□T	10	M,N	1.0	49	2.60	2.00
ASPI0704WE120□T	12	M,N	1.0	58	2.40	1.82
ASPI0704WE150□T	15	M,N	1.0	81	2.20	1.60
ASPI0704WE180□T	18	M,N	1.0	91	2.05	1.50
ASPI0704WE220□T	22	M,N	1.0	110	1.70	1.41
ASPI0704WE270□T	27	M,N	1.0	150	1.55	1.24
ASPI0704WE330□T	33	M,N	1.0	170	1.40	1.13
ASPI0704WE390□T	39	M,N	1.0	230	1.23	1.11
ASPI0704WE470□T	47	M,N	1.0	260	1.10	1.03
ASPI0704WE560□T	56	M,N	1.0	350	1.05	0.93
ASPI0704WE680□T	68	M,N	1.0	380	0.95	0.87
ASPI0704WE820□T	82	M,N	1.0	430	0.90	0.84
ASPI0704WE101□T	100	M,N	1.0	610	0.75	0.79
ASPI0704WE121□T	120	M,N	1.0	660	0.70	0.67
ASPI0704WE151□T	150	M,N	1.0	880	0.63	0.52
ASPI0704WE181□T	180	M,N	1.0	980	0.56	0.51
ASPI0704WE221□T	220	M,N	1.0	1170	0.54	0.44
ASPI0704WE271□T	270	M,N	1.0	1640	0.48	0.43
ASPI0704WE331□T	330	M,N	1.0	1860	0.45	0.39
ASPI0704WE391□T	390	M,N	1.0	2850	0.42	0.38
ASPI0704WE471□T	470	M,N	1.0	3010	0.34	0.29
ASPI0704WE561□T	560	M,N	1.0	3620	0.31	0.28
ASPI0704WE681□T	680	M,N	1.0	4630	0.28	0.23
ASPI0704WE821□T	820	M,N	1.0	5200	0.26	0.21
ASPI0704WE102□T	1000	M,N	1.0	6000	0.25	0.20

### NOTE :

\* The operating temperature range is -40°C to +125°C (Including self-temperature rise)

\* □ Tolerance M : ±20% , N : ±25% , Y:±30%

\*Isat:For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^\circ\text{C}$ . ( $T_a=20^\circ\text{C}$ )

## ◆ASPI1204WE Series Specification :

Part Number	Inductance ( $\mu$ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ( $m\Omega$ ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI1204WER60□T	0.6	Y	100	5.5	19.00	9.50
ASPI1204WE1R0□T	1.0	Y	100	7.0	13.90	8.50
ASPI1204WE1R8□T	1.8	Y	100	9.5	10.20	7.60
ASPI1204WE2R5□T	2.5	Y	100	11.0	8.50	6.80
ASPI1204WE3R3□T	3.3	Y	100	13.0	7.10	5.90
ASPI1204WE4R7□T	4.7	Y	100	16.0	6.30	5.20
ASPI1204WE6R8□T	6.8	M,N	100	25.0	4.70	4.30
ASPI1204WE100□T	10	M,N	1.0	30.0	4.20	3.80
ASPI1204WE120□T	12	M,N	1.0	38.0	3.60	3.50
ASPI1204WE180□T	18	M,N	1.0	43.0	3.20	3.20
ASPI1204WE220□T	22	M,N	1.0	54.0	3.10	2.90
ASPI1204WE330□T	33	M,N	1.0	85.0	2.50	2.30
ASPI1204WE470□T	47	M,N	1.0	125.0	2.10	2.00
ASPI1204WE101□T	100	M,N	1.0	270.0	1.40	1.30
ASPI1204WE221□T	220	M,N	1.0	480.0	1.00	0.95

### NOTE :

\* The operating temperature range is  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (Including self-temperature rise)

\* □ Tolerance M :  $\pm 20\%$  , N :  $\pm 25\%$  , Y:  $\pm 30\%$

\*Isat: For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^{\circ}\text{C}$  . ( $T_a = 20^{\circ}\text{C}$ )

## ◆ ASPI1205WE Series Specification :

Part Number	Inductance ( $\mu$ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ( $m\Omega$ ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI1205WE1R5□T	1.5	Y	1.0	6	12.50	10.50
ASPI1205WE2R2□T	2.2	Y	1.0	8	11.00	10.00
ASPI1205WE3R5□T	3.5	Y	1.0	8	9.00	9.25
ASPI1205WE4R7□T	4.7	Y	1.0	11	8.00	8.25
ASPI1205WE6R8□T	6.8	M,N	1.0	22	6.00	5.60
ASPI1205WE8R2□T	8.2	M,N	1.0	20	6.25	6.25
ASPI1205WE100□T	10	M,N	1.0	25	5.50	5.00
ASPI1205WE120□T	12	M,N	1.0	27	4.85	3.91
ASPI1205WE150□T	15	M,N	1.0	30	4.55	3.75
ASPI1205WE180□T	18	M,N	1.0	34	4.30	3.48
ASPI1205WE220□T	22	M,N	1.0	36	3.77	3.37
ASPI1205WE270□T	27	M,N	1.0	51	3.55	2.97
ASPI1205WE330□T	33	M,N	1.0	57	3.00	2.68
ASPI1205WE390□T	39	M,N	1.0	68	2.74	2.49
ASPI1205WE470□T	47	M,N	1.0	75	2.60	2.21
ASPI1205WE560□T	56	M,N	1.0	110	2.35	2.01
ASPI1205WE680□T	68	M,N	1.0	120	2.19	1.91
ASPI1205WE820□T	82	M,N	1.0	140	1.88	1.65
ASPI1205WE101□T	100	M,N	1.0	160	1.70	1.53
ASPI1205WE121□T	120	M,N	1.0	170	1.56	1.30
ASPI1205WE151□T	150	M,N	1.0	230	1.43	1.21
ASPI1205WE181□T	180	M,N	1.0	290	1.24	1.06
ASPI1205WE221□T	220	M,N	1.0	400	1.20	0.96
ASPI1205WE271□T	270	M,N	1.0	460	1.00	0.89
ASPI1205WE331□T	330	M,N	1.0	510	0.97	0.78
ASPI1205WE391□T	390	M,N	1.0	690	0.85	0.68
ASPI1205WE471□T	470	M,N	1.0	770	0.80	0.64
ASPI1205WE561□T	560	M,N	1.0	860	0.70	0.62
ASPI1205WE681□T	680	M,N	1.0	1200	0.68	0.55
ASPI1205WE821□T	820	M,N	1.0	1340	0.60	0.51
ASPI1205WE102□T	1000	M,N	1.0	1530	0.50	0.43

### NOTE :

\* The operating temperature range is  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (Including self-temperature rise)

\* □ Tolerance M :  $\pm 20\%$  , N :  $\pm 25\%$  , Y:  $\pm 30\%$

\* Isat: For Inductance drop 10% from its value without current.

\* Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^{\circ}\text{C}$  . ( $T_a = 20^{\circ}\text{C}$ )

## ◆ ASPI1207WE Series Specification :

Part Number	Inductance ( $\mu\text{H}$ )	Inductance Tolerance	Test Freq. (KHz)	DCR ( $\text{m}\Omega$ ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI1207WER47□T	0.47	Y	100	3	26.40	23.50
ASPI1207WER75□T	0.75	Y	100	4	21.00	19.80
ASPI1207WE1R2□T	1.2	Y	100	7	16.60	12.00
ASPI1207WE1R5□T	1.5	Y	100	6	12.00	10.00
ASPI1207WE2R4□T	2.4	Y	100	12	14.30	10.10
ASPI1207WE3R5□T	3.5	Y	100	14	9.60	8.90
ASPI1207WE4R7□T	4.7	Y	100	16	9.30	8.50
ASPI1207WE5R6□T	5.6	M,N	100	10	8.20	8.00
ASPI1207WE6R1□T	6.1	M,N	100	18	8.60	7.60
ASPI1207WE7R6□T	7.6	M,N	100	20	8.00	7.40
ASPI1207WE100□T	10	M,N	1.0	22	6.60	6.20
ASPI1207WE120□T	12	M,N	1.0	24	6.30	5.90
ASPI1207WE150□T	15	M,N	1.0	27	6.00	5.00
ASPI1207WE180□T	18	M,N	1.0	39	5.40	4.20
ASPI1207WE220□T	22	M,N	1.0	43	5.00	4.10
ASPI1207WE270□T	27	M,N	1.0	46	3.80	3.70
ASPI1207WE330□T	33	M,N	1.0	64	3.60	3.20
ASPI1207WE390□T	39	M,N	1.0	73	3.50	3.00
ASPI1207WE470□T	47	M,N	1.0	100	3.00	2.70
ASPI1207WE560□T	56	M,N	1.0	110	2.90	2.40
ASPI1207WE680□T	68	M,N	1.0	140	2.50	2.30
ASPI1207WE820□T	82	M,N	1.0	160	2.45	2.25
ASPI1207WE101□T	100	M,N	1.0	220	2.40	2.20
ASPI1207WE151□T	150	M,N	1.0	280	1.80	1.80
ASPI1207WE181□T	180	M,N	1.0	350	1.60	1.40
ASPI1207WE221□T	220	M,N	1.0	390	1.49	1.30
ASPI1207WE331□T	330	M,N	1.0	640	1.10	1.10
ASPI1207WE471□T	470	M,N	1.0	980	0.90	0.90
ASPI1207WE561□T	560	M,N	1.0	1070	0.90	0.80
ASPI1207WE681□T	680	M,N	1.0	1460	0.80	0.70
ASPI1207WE821□T	820	M,N	1.0	1640	0.80	0.60
ASPI1207WE102□T	1000	M,N	1.0	1820	0.70	0.60

### NOTE :

\* The operating temperature range is  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (Including self-temperature rise)

\* □ Tolerance M :  $\pm 20\%$  , N :  $\pm 25\%$  , Y:  $\pm 30\%$

\*Isat: For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^{\circ}\text{C}$  . ( $T_a = 20^{\circ}\text{C}$ )



## ◆ ASPI1209WE Series Specification :

Part Number	Inductance ( $\mu$ H)	Inductance Tolerance	Test Freq. (KHz)	DCR ( $m\Omega$ ) Max.	Saturation Current (A) Max.	Temp. Rise Current (A) Max.
ASPI1209WE1R0□T	1.0	Y	1.0	6.0	25.00	13.00
ASPI1209WE2R2□T	2.2	Y	1.0	6.0	20.00	11.50
ASPI1209WE3R5□T	3.5	Y	1.0	9.0	16.50	11.00
ASPI1209WE4R7□T	4.7	Y	1.0	11.0	13.00	9.30
ASPI1209WE6R8□T	6.8	M,N	1.0	14.0	12.80	8.40
ASPI1209WE100□T	10	M,N	1.0	21.0	10.50	7.10
ASPI1209WE150□T	15	M,N	1.0	26.0	8.00	6.50
ASPI1209WE220□T	22	M,N	1.0	28.0	6.50	5.30
ASPI1209WE270□T	27	M,N	1.0	40.0	5.80	4.60
ASPI1209WE330□T	33	M,N	1.0	45.0	5.50	4.20
ASPI1209WE390□T	39	M,N	1.0	56.0	5.00	4.10
ASPI1209WE470□T	47	M,N	1.0	60.0	4.50	3.80
ASPI1209WE680□T	68	M,N	1.0	89.0	3.60	3.20
ASPI1209WE820□T	82	M,N	1.0	90.5	3.40	2.75
ASPI1209WE101□T	100	M,N	1.0	110.0	3.10	2.50
ASPI1209WE151□T	150	M,N	1.0	200.0	2.70	2.10
ASPI1209WE221□T	220	M,N	1.0	300.0	2.20	1.80
ASPI1209WE271□T	270	M,N	1.0	330.0	2.10	1.60
ASPI1209WE331□T	330	M,N	1.0	430.0	1.70	1.50
ASPI1209WE471□T	470	M,N	1.0	560.0	1.50	1.40
ASPI1209WE681□T	680	M,N	1.0	825.0	1.30	1.10
ASPI1209WE821□T	820	M,N	1.0	1000.0	1.10	0.95
ASPI1209WE102□T	1000	M,N	1.0	1200.0	1.00	0.90
ASPI1209WE152□T	1500	M,N	1.0	2300.0	0.80	0.70

### NOTE :

\* The operating temperature range is  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (Including self-temperature rise)

\* □ Tolerance M :  $\pm 20\%$  , N :  $\pm 25\%$  , Y:  $\pm 30\%$

\*Isat: For Inductance drop 10% from its value without current.

\*Irms: The value of D.C current when the temperature rise is  $\Delta T \leq 40^{\circ}\text{C}$  . ( $T_a = 20^{\circ}\text{C}$ )