

## SPECIFICATIONS

PA640-01-01/E-B

ITEMS		MODEL	DBM20/E
1	Nominal Buffer Voltage (Fixed Mode)	V	22.4
2	Buffer Current	A	20
3	Buffer Power (* 1)	W	448
4	Nominal Input Voltage	V	24
5	Input Voltage Range (Fixed Mode) (VIN-1)	V	23 - 30 24 - 30
6	Input Current (Typ.)	A	0.8 at Charging Mode 0.2 at Ready Mode
7	Charging Time (Typ.)	s	40
8	Buffer Voltage Accuracy (* 1) (Fixed Mode)	%	± 2
	(* 9) (VIN-1)	%	+3/-4
9	Maximum Ripple & Noise (* 1, 3)	mV	< 240
10	Input Over Voltage Protection (* 2)	-	Yes
11	Over Current Protection (* 4)	-	> 105% of rated Buffer Current
12	Buffer time (Typ) (* 1, 5)	ms	250
13	Monitoring Signals (* 6)	-	a) DC OK Signal (Photo Relay Rated : 30V, 0.2A) b) Ready, Buffer & Inhibit Signals (Common Supply Voltage)
14	Ready Mode Indication (* 10)	-	Green LED
15	Buffer Mode Indication (* 11)	-	Red LED
16	Parallel Operation	-	Yes
17	Series Operation	-	No
18	Operating Temperature (* 7)	°C	-25 ~ + 70 °C
19	Operating Humidity	-	30 ~ 90%RH (No Dewdrop)
20	Storage Temperature	°C	-25 ~ + 85 °C
21	Storage Humidity	-	10 ~ 90%RH (No Dewdrop)
22	Operating Altitude	m	5000
23	Cooling	-	Convection Cooling
24	Withstand Voltage	-	Input/output & signal ports - FG : 500VAC (100mA) 1 MINUTE
25	Isolation Resistance	-	Input/output & signal ports - FG : ... More Than 100MΩ (500VDC) AT Ta=25°C & 70%RH
26	Vibration	-	At no operating, 10 - 55Hz (sweep for 1min) 19.6m/s <sup>2</sup> Constant, X, Y, Z 1hour each.
27	Shock	m/s <sup>2</sup>	Less than 196.1
28	Safety	-	Approved by : IEC62368-1 (EN62368-1 : CB and Certificate), UL62368-1, CSA C22.2 No. 62368-1, UL508, CSA C22.2 NO. 107.1
29	CE		LVD, RoHS 2, EMC
30	UKCA		Safety and EMC Reg. 2016, Hazard. Substances Reg. 2012
31	EMI (* 8)	-	Design to meet EN55032-B, CISPR32-B
32	Immunity	-	Design to meet IEC61000-4-2 (Level 4), -3 (Level 3), -4 (Level 3), -5 (Level 2), -6 (Level 3)
33	Weight (Typ.)	g	740
34	Warranty	-	5-Year
35	Dimension (W x H x D)	mm	49 X 123.6 X 115.4 (Refer to Outline Drawing)

\* Read instruction manual carefully , before using the buffer module unit.

= NOTES=

- \* 1 : At Ta=25 °C, nominal buffer voltage and average buffer power.
- \* 2 : Input voltage is 35Vmax.
- \* 3 : Ripple & noise are measured at 20MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF film capacitor and a 100uF electrolytic capacitor.
- \* 4 : When the buffering current exceeds 105% of the maximum DC buffer current specification, OCP operation will be activated. Automatic recovery.
- \* 5 : Refer to (PA640-01-03/E\_) for buffer time versus buffer current.
- \* 6 : Please refer to instruction manual for more details.
- \* 7 : Refer to Derating Curve (PA640-01-02/E\_) for details of buffer current versus ambient temperature.
- \* 8 : EMI (CE) compliance to be confirmed at system level. Product is considered as a peripheral accessory to power supply.
- \* 9 : Buffer current, Iout > 5%.
- \* 10 : GREEN LED will be ON if the bulk electrolytic capacitors are more than 220V typical.
- \* 11 : RED LED will be OFF if the bulk electrolytic capacitors are less than 50V typical.
- \* 12 : All parameters NOT specifically mentioned are measured at rated load & nominal input at ready mode, and during buffering it is at fixed mode.  
All measurement are conducted at Ta=25 °C.

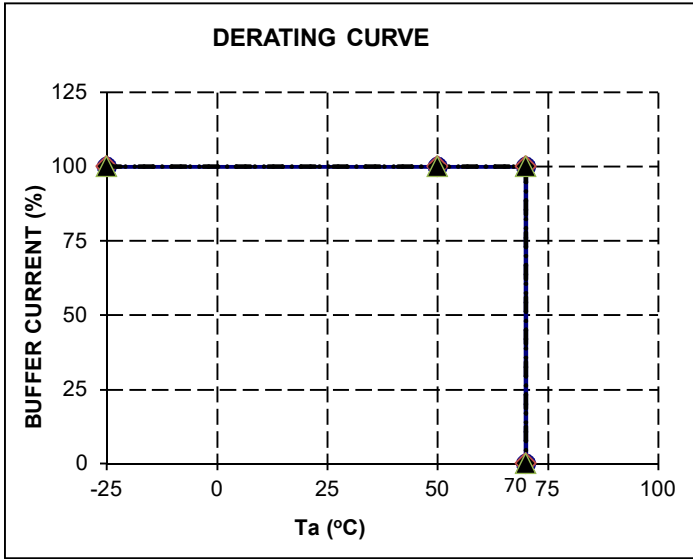
**DBM20/E**

PA640-01-02/E-B

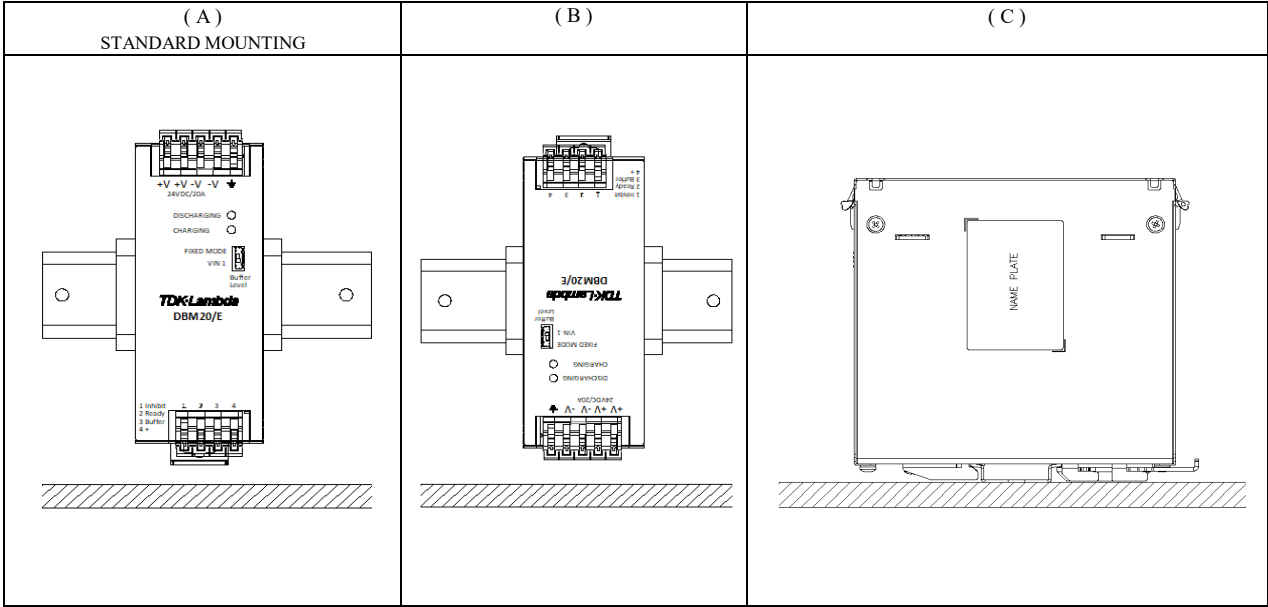
DERATING CURVE FOR BUFFER CURRENT VERSUS AMBIENT TEMPERATURE

\*COOLING : CONVECTION COOLING

Ta (°C)	LOAD (%)		
	(A) Standard Mounting	(B)	(C)
-25 - +70	100	100	100



- (A) Standard Mounting
- ◆— (B)
- ▲— (C)



**DBM20/E**

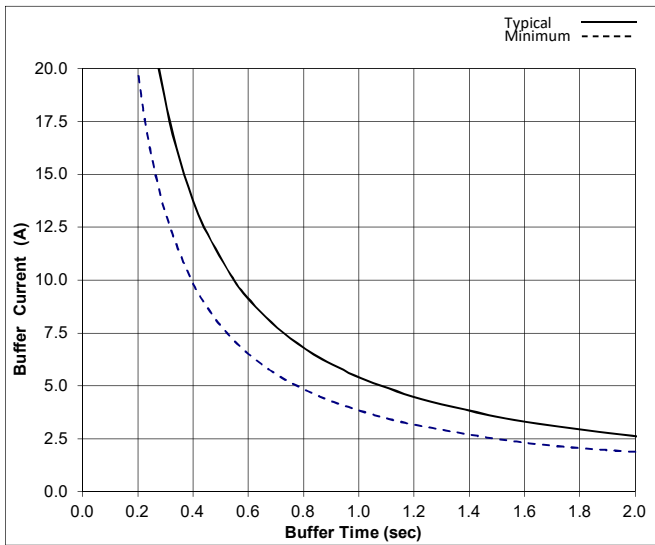
PA640-01-03/E-A

\*Note : Ta=25°C and initial capacitance.

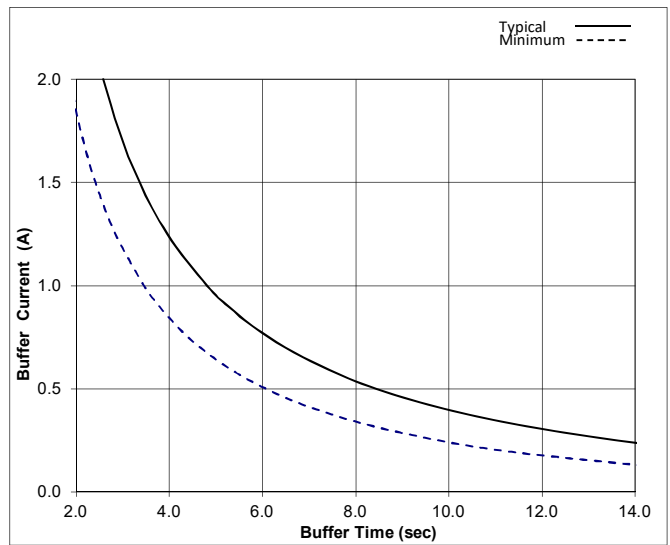
**BUFFER TIME VERSUS BUFFER CURRENT**

**FIXED Mode and Nominal Buffer Voltage**

a) Buffer time : 0 - 2 sec

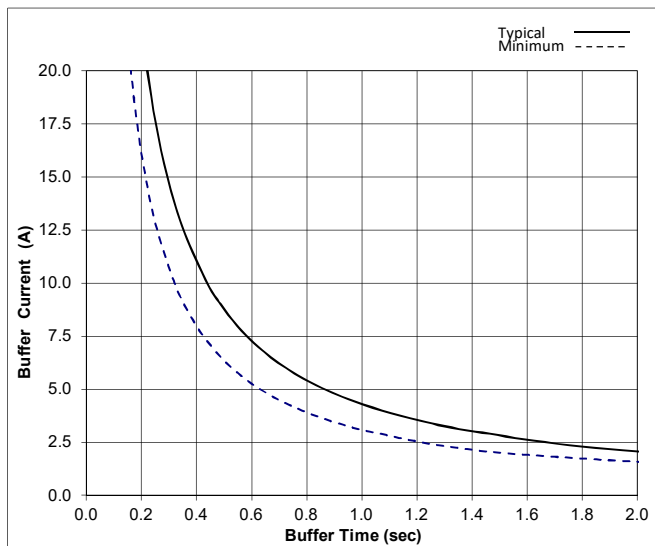


b) Buffer time for small buffer current : 2 - 14 sec



**VIN-1 and Maximum Buffer Voltage**

a) Buffer time : 0 - 2 sec



b) Buffer time for small buffer current : 2 - 12 sec

