# TT Series

# <u>microSDHC/microSDXC Memory Card, Consumer Plus MLC Model</u> (Extended Temperature)

#### ■ Product Outline

TT series are microSDHC/microSDXC memory cards adopting built-in MLC NAND flash memory. They are formatted complying with SD card specification.

■ **Product Specification** (specifications and appearances may be changed without notice.)

Appearance		32GB	64GB
		Panasonic  Micro (©  II 3  32GB  Made in Taiwan	Panasonic Micro (c) XC I 3  64GB Made in Taiwan
Part Number		RP-SMTT32DA1	RP-SMTT64DA1
Capacity	Available user data area capacity *1)	32,098,975,744 bytes	64,189,235,200 bytes
Compliant Specification	SD Physical Specification	Ver. 4.20	
	SD speed class	CLASS(10)	
	UHS speed grade	<b>I</b> 3	
	Speed mode	Default Speed mode, High Speed mode, SDR12, SDR25, SDR50, DDR50, SDR104	
Backside mark	Control Code		
Read/Write Performance (up to)	Read	95MB/s (SDR104 mode)	
	Write	90MB/s (SDR104 mode)	
Absolute Maximum Ratings	Supply Voltage	Min: -0.3 V; Max: +4.6 V	
	Input Voltage	Min: -0.3 V; Max: VDD +0.3 V	
	Output Voltage	Min: -0.3 V; Max: VDD +0.3 V	
	Output Current	Min: -24 mA; Max: +24 mA	
Environmental Specification	Operating Temperature	-40 degree C to +85 degree C	
	Storage Temperature	-40 degree C to +85 degree C	
	Humidity	5 % RH to 95 % RH	
	Vibration	15 Gp-p	
	Shock	1,000 G	
	Mating Cycles	10,000 cycles	

<sup>\*1)</sup> Free user area capacity after formatted.

Absolute Maximum Ratings are the values of limitation, which do not damage the card. So those values do not define the operational range.

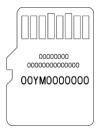
Products comply with EU RoHS directives.

Panasonic RP-SMTTxxDA1

## ■Marking Specification (example: 32GB)



"32GB" Card Capacity
"Made in Taiwan" Country of origin



"000000000" Internal control code "000000000000" Internal control code

"00YM000000" Serial Number
Y Last digit of Manufacture year
M Manufacture month
(January->A, February->B,

### ■ System Reliability

- a. Error detect and corrective function
- b. Static wear leveling
- c. Bad block management

#### ■ Notice and Caution

If you think about the usage for which special quality or reliability of the products is needed and failure or malfunction of the products may directly threaten life or injury for the special usage (aeronautic or cosmic usage, military usage, combustion machine, life support applications or safety applications), please counsel with our contacts in advance.

Write frequency and storage temperature will affect data retention time. Please make a backup for important data.

#### **■** Warranty

If the product cannot be used because of failure which is determined as defect in design or in production of the product, it is replaced by same product or equivalent one within 12 months from the delivery date of product.