

MEMORY CARDS

Industrial Grade 3.0 microSD Card



- Comply to the Secure Digital Association / SDA standard
- MLC and Ultra MLC* NAND Flash technology Class 10
- MLC capacity 4 ~ 64GB, Ultra MLC capacity 4 ~ 32GB
- Temperature range -25°C OR -40°C ~ 85°C
- Conforms to ISO7816-1 UV Guard & X-Ray Proof
- Extreme rugged, vibration, water and shock resistant
- Made in Taiwan - Fixed BOM available

* Ultra MLC features and endurance is close to SLC performance but to lower cost.

Technical data:

Electrical & performance:

Interface: 8-pin. Supports version 3.0
 Operating frequency: 50MHz or 100MHz
 DC input voltage: 2.7-3.6VDC
 Power consumption: 100mA (typical)
 Transfer rate MLC/Ultra: Read 22/22MB/s and write 10/18MB/s

Environmental:

Temperature range: MLC: -25°C ~ +85°C or -40° C ~ +85°C
 Ultra MLC: -25°C ~ +85°C
 Storage temperature: -40° C ~ +85°C
 Humidity: 10% ~ 95%, non-condensing
 Vibration: 5G (10-500Hz), 20G (60-2000Hz)
 Shock: 1500G (0.5ms)
 ESD proof: Yes, +/-4kV
 Acoustic noise: 0dB
 IP class: IPX7

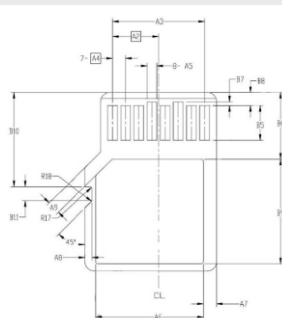
Reliability:

Endurance: >2.000.000 cycles
 Program/Erase cycles: MLC: 3.000 times / Ultra MLC: 50.000 times
 Data retention: 1 ~ 10 years depending upon write erase cycles
 Number of Insertion reliability: 10.000 times
 MTBF: 3.000.000 hours

Mechanical & Certificates:

Size: 15x11x1mm
 Weight: <1g (MicroSD card only), 6g packed in small minicase
 Certificate: CE/FCC/RoHS/BSMI

Dimensions:



COMMON DIMENSIONS			
SYMBOL	MIN	NOM	MAX
A	10.90	11.00	11.10
A1	9.60	9.70	9.80
A2	-	3.95	-
A3	7.60	7.70	7.80
A4	-	1.10	-
A5	0.75	0.80	0.85
A6	-	-	8.50
A7	0.50	-	-
A8	0.60	0.70	0.80
A9	0.80	-	-
B	14.90	15.00	15.10
B1	8.30	8.40	8.50
B2	1.64	1.64	2.04
B3	1.30	1.50	1.70
B4	0.42	0.52	0.62
B5	2.80	2.90	3.00
B6	5.50	-	-
B7	0.20	0.30	0.40
B8	1.00	1.10	1.20
B9	-	-	9.00
B10	7.80	7.90	8.00
B11	1.10	1.20	1.30

C	0.90	1.00	1.10
C1	0.60	0.70	0.80
C2	0.20	0.30	0.40
C3	0.00	-	0.15
D1	1.00	-	-
D2	1.00	-	-
D3	1.00	-	-
R1	0.20	0.40	0.60
R2	0.20	0.40	0.60
R3	0.70	0.80	0.90
R4	0.70	0.80	0.90
R5	0.70	0.80	0.90
R6	0.70	0.80	0.90
R7	29.50	30.00	30.50
R10	-	0.20	-
R11	-	0.20	-
R17	0.10	0.20	0.30
R18	0.20	0.40	0.60
R19	0.05	-	0.20

Ordering information:

MLC (-25°C)	MLC (-40°C)	Ultra MLC type	Capacity
TFPX004GM0-PM	TFPX004GW0-PM	TFPX004GE0-PM	4GB
TFPX008GM0-PM	TFPX008GW0-PM	TFPX008GE0-PM	8GB
TFPX016GM0-PM	TFPX016GW0-PM	TFPX016GE0-PM	16GB
TFPX032GM0-PM	TFPX032GW0-PM	TFPX032GE0-PM	32GB
TFPX064GM0-PM	TFPX064GW0-PM	Not available	64GB