

TOSHIBA

TD62M4503AFN

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI-CHIP

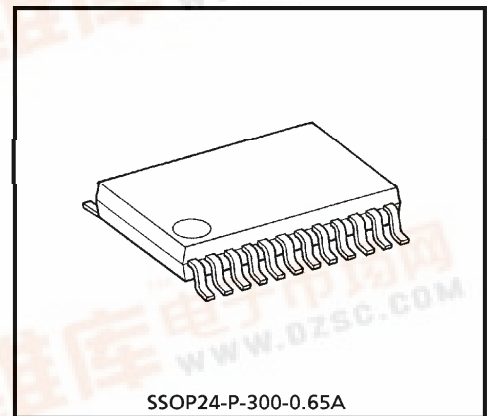
TD62M4503AFN

POWER MOS FET 4CH SINK DRIVER

TD62M4503AFN is 1CHIP 4ch FET Sink Driver built in Discrete Power MOS FET (2SK1078)×4 and Diodes (1SS184).

FEATURES

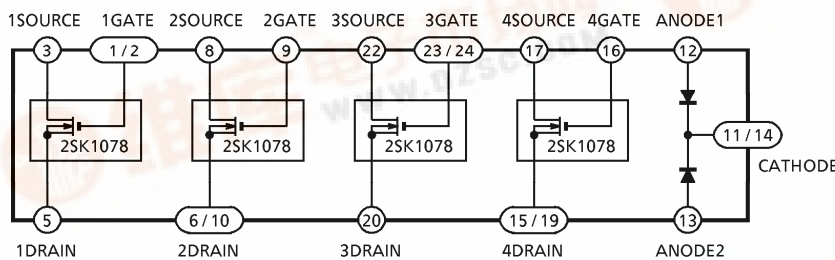
- 4V Drive
- Low ON Resistance : $R_{DS(ON)} = 0.58\Omega$ (Typ.)
- Low Leakage Current
 - : $I_{GSS} = \pm 3\mu A$ (Max.) ($V_{GS} = \pm 16V$)
 - : $I_{GSS} = 100\mu A$ (Max.) ($V_{GS} = 60V$)
- Enhancement Type
 - : $V_{th} = 0.8\sim 2.0V$ ($V_{DS} = 10V, I_D = 1mA$)
- Small Package : VSOP 24 (0.65mm Pitch)



SSOP24-P-300-0.65A

Weight : 0.14g (Typ.)

BLOCK DIAGRAM

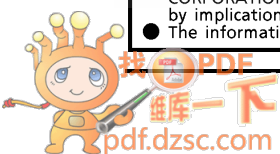


PIN CONNECTION (TOP VIEW)

| | | | |
|---------|----|----|---------|
| 1GATE | 1 | 24 | 3GATE |
| 1GATE | 2 | 23 | 3GATE |
| 1SOURCE | 3 | 22 | 3SOURCE |
| NC | 4 | 21 | NC |
| 1DRAIN | 5 | 20 | 3DRAIN |
| 2DRAIN | 6 | 19 | 4DRAIN |
| NC | 7 | 18 | NC |
| 2SOURCE | 8 | 17 | 4SOURCE |
| 2GATE | 9 | 16 | 4GATE |
| 2DRAIN | 10 | 15 | 4DRAIN |
| CATHODE | 11 | 14 | CATHODE |
| ANODE1 | 12 | 13 | ANODE2 |

NC : Non Connection
961001EBA2

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MIXMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|--|------------------|-----------------|------|
| Drain-Source Voltage | V _{DSS} | 60 | V |
| Drain-Gate Voltage (R _{GS} = 20kΩ) | V _{DGR} | 60 | V |
| Gate-Source Voltage | V _{GSS} | ± 20 | V |
| Drain Current | DC | I _D | 0.8 |
| | Pulse | I _{DP} | 1.6 |
| Diode Reverse Voltage | V _R | 80 | V |
| Diode Average Rectifier Current | I _O | 0.1 | A |
| Power Dissipation | — | P _D | 0.78 |
| | (Note 1) | | 0.89 |
| Junction Temperature | T _j | 150 | °C |
| Operating Temperature | T _{opr} | - 40~85 | °C |
| Storage Temperature | T _{stg} | - 55~150 | °C |

(Note 1) On Glass Epoxy PCB (50×50×1.6mm Cu 40%)

This device is an electrostatic sensitivity device. Please handle with caution.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

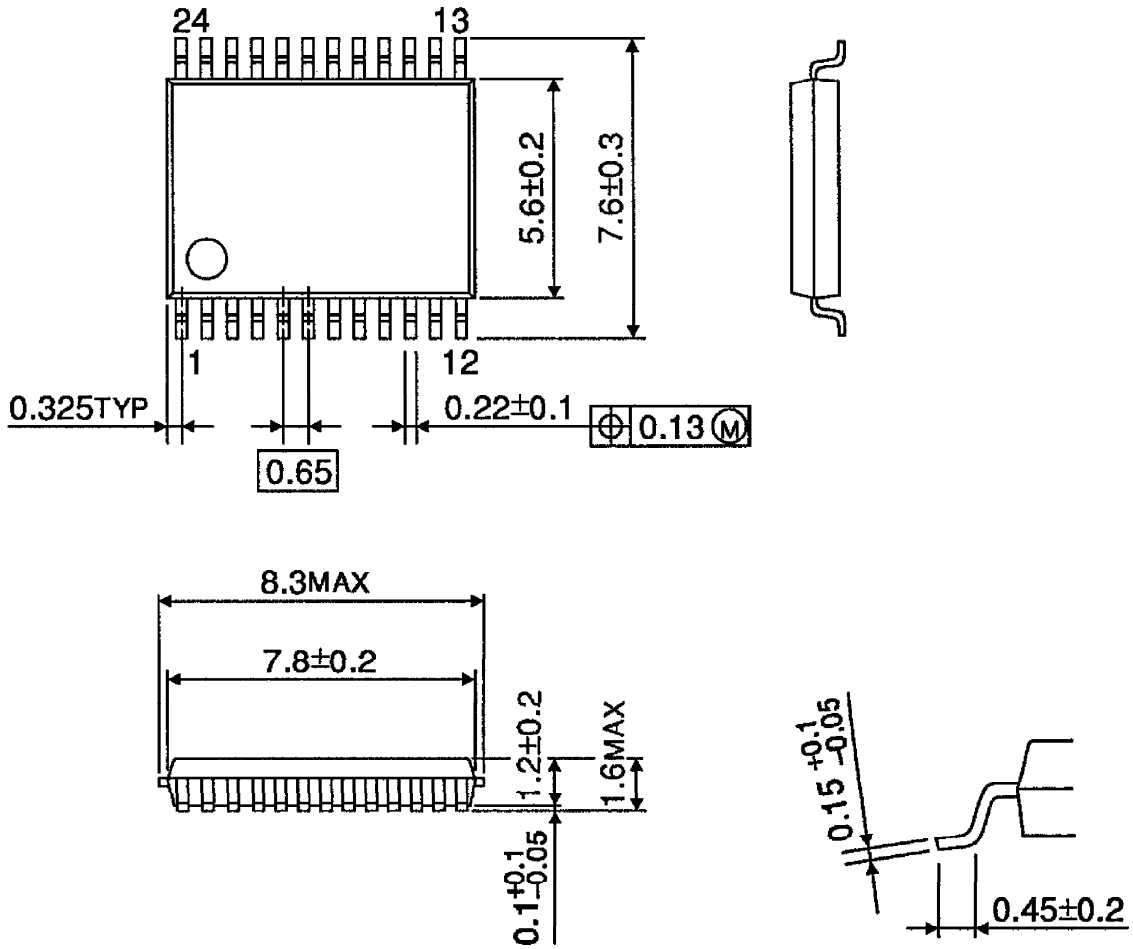
| CHARACTERISTIC | SYMBOL | TEST CIR-CUIT | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-----------------------------------|----------------------|---------------|---|------|------|------|------|
| Gate Leakage Current | I _{GSS} | — | V _{GS} = ± 16V, V _{DS} = 0V | — | — | ± 3 | μA |
| Drain Cut-off Current | I _{DSS} | — | V _{DS} = 60V, V _{GS} = 0V | — | — | 100 | μA |
| Drain Source Braekdown Voltage | V (BR) DSS | — | I _D = 10mA, V _{GS} = 0V | 60 | — | — | V |
| Gate Thresold Voltage | V _{th} | — | V _{DS} = 10V, I _D = 1mA | 0.8 | — | 2.0 | V |
| Drain ON Current | I _{D (ON)} | — | V _{DS} = 4V, V _{GS} = 4V | 0.8 | — | — | A |
| Drain-Source ON Resistance | R _{DS (ON)} | — | V _{GS} = 4V, I _D = 0.4A | — | 0.75 | 1.1 | Ω |
| | | | V _{GS} = 10V, I _D = 0.4A | — | 0.58 | 0.70 | Ω |
| Diode Forward Voltage | V _{F (1)} | — | I _F = 1mA | — | 0.60 | — | V |
| | V _{F (2)} | — | I _F = 10mA | — | 0.72 | — | |
| | V _{F (3)} | — | I _F = 100mA | — | 1.0 | 1.4 | |
| Diode Reverse Current | I _{R (1)} | — | V _R = 30V | — | — | 0.1 | μA |
| | I _{R (2)} | — | V _R = 80V | — | — | 0.5 | μA |

PRECAUTIONS for USING

Utmost care is necessary in the design of the output line, V_{CC} and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

OUTLINE DRAWING
SSOP24-P-300-0.65A

Unit : mm



Weight : 0.14g (Typ.)