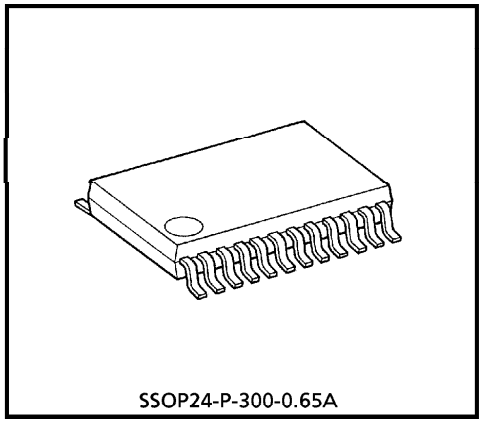
TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI-CHIP

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).



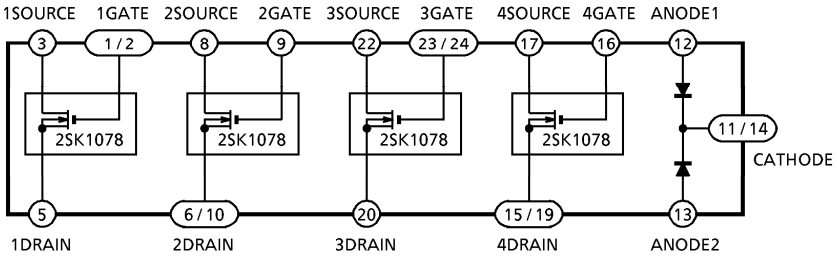
SSOP24-P-300-0.65A

Weight : 0.14g (Typ.)

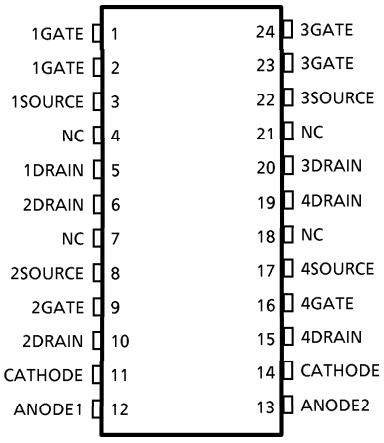
FEATURES

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

BLOCK DIAGRAM



PIN CONNECTION (TOP VIEW)



NC : Non Connection

961001EBA2

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	A
	Pulse	I_{DP}	1.6	A
Diode Reverse Voltage		V_R	80	V
Diode Average Rectifier Current		I_O	0.1	A
Power Dissipation	—	P_D	0.78	W
	(Note 1)		0.89	W
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 caurion.

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 Braeakdown 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

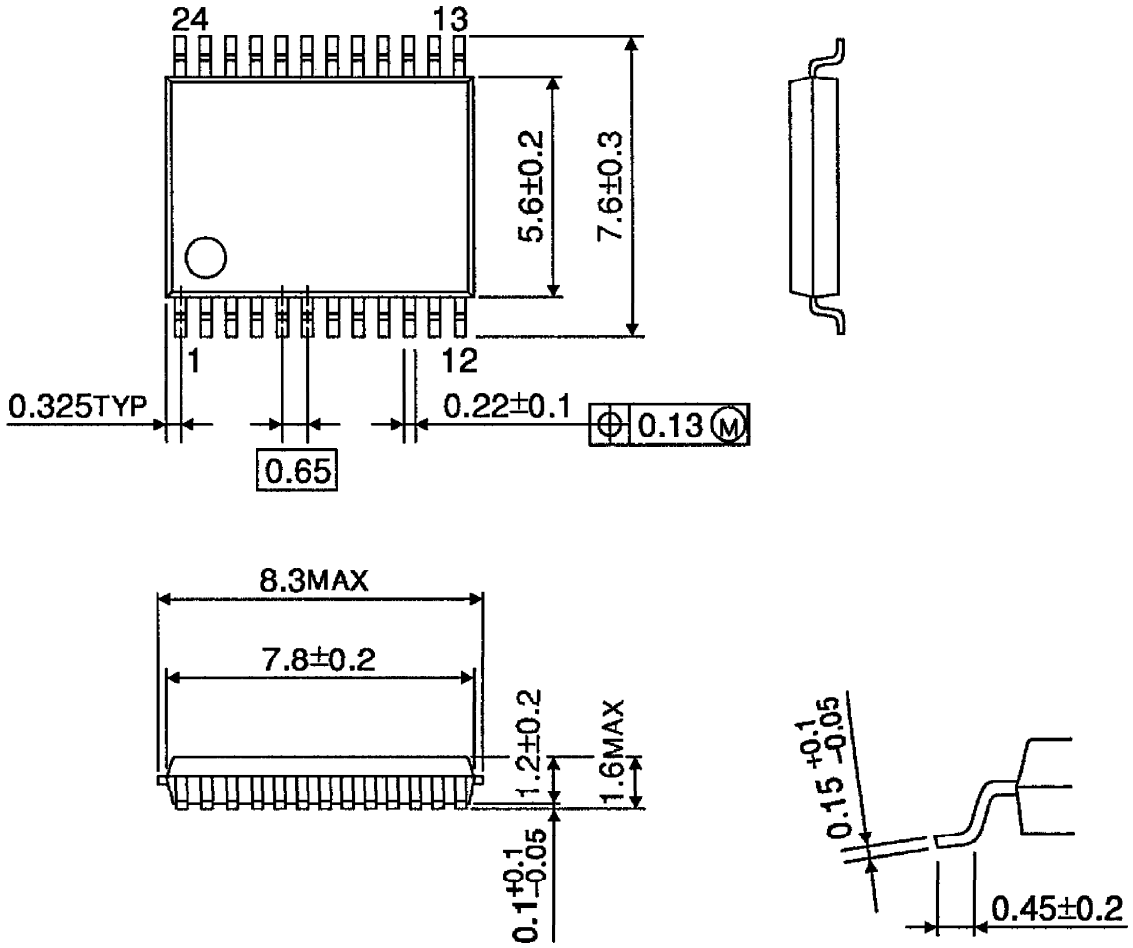
PRECAUTIONS for USING

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



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