TOSHIBA TD62M4503AFN

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT MULTI-CHIP

T D 6 2 M 4 5 0 3 A F N

POWER MOS FET 4CH SINK DRIVER

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



4V Drive

Low ON Resistance : $R_{DS}(ON) = 0.58\Omega$ (Typ.)

Low Leakage Current

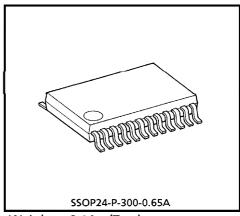
: $I_{GSS} = \pm 3\mu A \text{ (Max.) (V}_{GS} = \pm 16V)$

: $I_{GSS} = 100 \mu A \text{ (Max.) (V}_{GS} = 60 \text{V)}$

Enhancement Type

: $V_{th} = 0.8 \sim 2.0 \text{V} \text{ (V}_{DS} = 10 \text{V}, I_D = 1 \text{mA})$

Small Package: VSOP 24 (0.65mm Pitch)



Weight: 0.14g (Typ.)

BLOCK DIAGRAM

1SOURCE 1GATE 2SOURCE 2GATE 3SOURCE 3GATE 4SOURCE 4GATE ANODE1 11/14 2SK1078 2SK1078 2SK1078 2SK1078 CATHODE 6/10 15/19 1DRAIN 2DRAIN 3DRAIN 4DRAIN ANODE2

PIN CONNECTION (TOP VIEW)



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MIXMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Drain-Source Voltage	V _{DSS}	60	V	
Drain-Gate Voltage $(R_{GS} = 20k\Omega)$	V _{DGR}	V _{DGR} 60		
Gate-Source Voltage	VGSS	± 20	V	
Drain Current	DC	I _D	0.8	Α
Diani Current	Pulse I _{DP} 1.6		1.6	Α
Diode Reverse Voltage	V _R	80	V	
Diode Average Rectifier	Ю	0.1	Α	
Power Dissipation	_	D-	0.78	W
Power Dissipation	(Note 1)	P_{D}	0.89	W
Junction Temperature	Tj	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	IGSS	_	$V_{GS} = \pm 16V, V_{DS} = 0V$	_	_	±3	μ A
Drain Cut-off Current	IDSS	_	$V_{DS} = 60V, V_{GS} = 0V$	_	_	100	μΑ
Drain Source Braeakdown Voltage	V (BR) DSS	_	I _D = 10mA, V _{GS} = 0V	60	_	_	٧
Gate Thresold Voltage	V _{th}	_	V _{DS} = 10V, I _D = 1mA	0.8	_	2.0	V
Drain ON Current	ID (ON)	_	$V_{DS} = 4V$, $V_{GS} = 4V$	0.8	_	_	Α
Drain-Source ON	RDS (ON)		$V_{GS} = 4V, I_D = 0.4A$	_	0.75	1.1	Ω
Resistance			$V_{GS} = 10V, I_D = 0.4A$	_	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	μΑ
	I _R (2)	_	V _R = 80V	_	_	0.5	μ A

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 24 13 20 49 49 49 49 40 0.325TYP 0.325TYP 8.3MAX 7.8±0.2 7.8±0.2 0.45±0.2

Weight: 0.14g (Typ.)