

Field Effect Transistor

Silicon N Channel MOS Type (π -MOS II)

High Speed, High Current Switching Applications

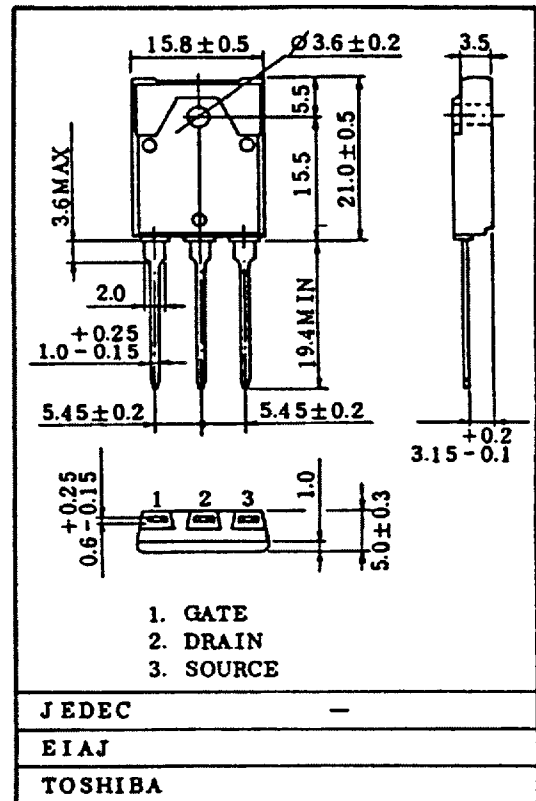
Features

- High Breakdown Voltage
 - $V_{(BR)DSS} = 900V$
- High Forward Transfer Admittance
 - $|Y_{fs}| = 1.7S$ (Typ.)
- Low Leakage Current
 - $I_{GSS} = \pm 100nA$ (Max.) ($V_{GS} = \pm 20V$)
 - $I_{DSS} = -300\mu A$ (Max.) ($V_{DS} = 900V$)
- Enhancement-Mode
 - $V_{th} = 1.5 \sim 3.5V$ ($I_D = 1mA$)

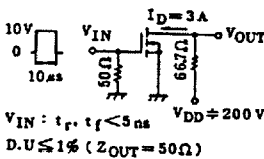
Absolute Maximum Ratings ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	900	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	DC	I_D	A
	Pulse	I_{DP}	
Drain Power Dissipation ($T_c = 25^\circ C$)	P_D	85	W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$

Unit in mm



Electrical Characteristics (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0$	—	—	± 100	nA
Drain Cut-off Current		I_{DSS}	$V_{DS} = 900V, V_{GS} = 0$	—	—	300	μA
Drain-Source Breakdown Voltage		$V_{(BR) DSS}$	$I_D = 10mA, V_{GS} = 0$	900	—	—	V
Gate Threshold Voltage		V_{th}	$V_{DS} = -10V, I_D = 1mA$	1.5	—	3.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS} = 10V, I_{DS} = 3A$	1.0	1.7	—	S
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D = 3A, V_{GS} = 10V$	—	2.1	2.5	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D = 5A, V_{GS} = 10V$	—	11	13	V
Input Capacitance		C_{iss}	$V_{DS} = 25V, V_{GS} = 0,$ $f = 1MHz$	—	1400	1900	μF
Reverse Transfer Capacitance		C_{rss}		—	110	200	
Output Capacitance		C_{oss}		—	190	300	
Switching Time	Rise Time	t_r	 $V_{IN} : t_r, t_f < 5ns$ $I_D = 3A$ $V_{DD} = 200V$ $D.U \leq 1\% (Z_{OUT} = 50\Omega)$	—	110	220	ns
	Turn-on Time	t_{on}		—	130	260	
	Fall Time	t_f		—	90	260	
	Turn-off Time	t_{off}		—	480	900	

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