

TENTATIVE

TPC6102

NOTE BOOK PC
PORTABLE EQUIPMENTS APPLICATIONS

INDUSTRIAL APPLICATIONS
UNIT:mm

- Low Drain - Source ON Resistance : $R_{DS(ON)} = \quad m\Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}| = \quad S$ (Typ.)
- Low Leakage Current : $I_{DSS} = -10\mu A$ (Max.) ($V_{DS} = -30V$)
- Enhancement - Model : $V_{th} = -0.8 \sim -2.0V$ ($V_{DS} = -10V, I_D = -1mA$)

MAXIMUM RATINGS ($T_a = 25^\circ C$)

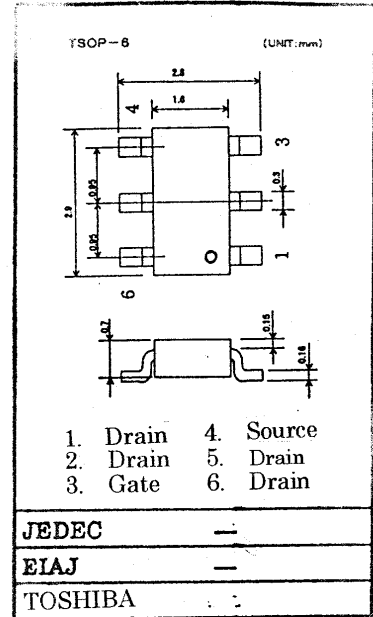
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain - Source Voltage	V_{DSS}	-30	V
Drain - Gate Voltage ($R_{GS} = 20k\Omega$)	V_{DGR}	-30	V
Gate - Source Voltage	V_{GSS}	± 20	V
Drain Current	DC	I_D	-4.5 A
	Pulse	I_{DP}	-18 A
Drain Power Dissipation ($T_a = 25^\circ C$) *	P_D	2.0	W
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

THERMAL CHARACTERISTICS

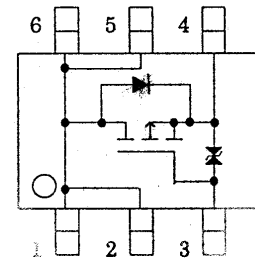
CHARACTERISTICS	SYMBOL	MAX.	UNIT
Thermal Resistance, Channel to Ambient*	$R_{th(ch-a)}$	62.5	$^\circ C/W$

Note; *Drive operation ; Mount on glass epoxy board
(1inch²X0.8t) (t=5s)

THIS TRANSISTOR IS AN ELECTROSTATIC SENSITIVE DEVICE.
PLEASE HANDLE WITH CAUTION.



CIRCUIT CONFIGURATION



ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0V$	-	-	± 10	μA
Drain Cut-off Current		I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$	-	-	-10	μA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	$I_D = -10mA, V_{GS} = 0V$	-30	-	-	V
		$V_{(BR)DSX}$	$I_D = -10mA, V_{GS} = 20V$	-15	-	-	V
Gate Threshold Voltage		V_{th}	$V_{DS} = -10V, I_D = -1mA$	-0.8	-	-2.0	V
Drain-Source ON Resistance		$R_{DS(ON)}$	$V_{GS} = -4.5V, I_D = -2.2A$	-	78	100	$m\Omega$
			$V_{GS} = -10V, I_D = -2.2A$	-	48	60	
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS} = -10V, I_D = -2.2A$	3.0	6.0	-	S
Input Capacitance		C_{iss}	$V_{DS} = -10V, V_{GS} = 0V$ $f = 1MHz$	-	500	-	pF
Reverse Transfer Capacitance		C_{rss}		-	110	-	
Output Capacitance		C_{oss}		-	150	-	
Switching Time	Rise Time	t_r		-	-	-	ns
	Turn-on Time	t_{on}		-	-	-	
	Fall Time	t_f		-	-	-	
	Turn-off Time	t_{off}		-	-	-	
Total Gate Charge (Gate-Source Plus Gate-Drain)		Q_g	$V_{DD} = -24V, V_{GS} = -10V$ $I_D = -4.5A$	-	11	-	nC
Gate-Source Charge		Q_{gs}		-	8.5	-	
Gate-Drain("Miller")Charge		Q_{gd}		-	2.5	-	

SOURCE - DRAIN DIODE RATINGS AND CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Continuous Drain Reverse Current	I_{DR}	-	-	-	-4.5	A
Pulse Drain Reverse Current	I_{DRP}	-	-	-	-18	A
Diode Forward Voltage	V_{DSF}	$I_{DR} = -4.5A, V_{GS} = 0V$	-	-	1.2	V

Rev. May 12, 2000