

HIGH SPEED, HIGH VOLTAGE SWITCHING APPLICATIONS.  
SWITCHING REGULATOR, DC-DC CONVERTER AND MOTOR DRIVE APPLICATIONS.

**FEATURES:**

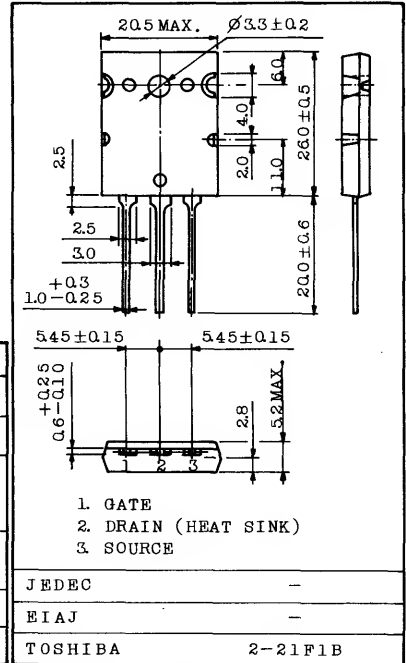
- Low Drain-Source ON Resistance :  $R_{DS(ON)}=0.12\Omega$  (Typ.)
- High Forward Transfer Admittance :  $|Y_{fs}|=6S$  (Typ.)
- Low Leakage Current :  $I_{GSS}=\pm 100nA$ (Max.) @  $V_{GS}=\pm 20V$   
 $I_{DSS}=1mA$ (Max.) @  $V_{DS}=150V$
- Enhancement-Mode :  $V_{th}=1.5\sim 3.5V$  @  $I_D=1mA$

**MAXIMUM RATINGS (Ta=25°C)**

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		$V_{DSX}$	150	V
Gate-Source Voltage		$V_{GSS}$	$\pm 20$	V
Drain Current	DC	$I_D$	12	A
	Pulse	$I_{DP}$	40	
Drain Power Dissipation (Tc=25°C)		$P_D$	150	W
Channel Temperature		$T_{ch}$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C

**INDUSTRIAL APPLICATIONS**

Unit in mm



**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0$	-	-	$\pm 100$	nA
Drain Cut-off Current		$I_{DSS}$	$V_{DS}=150V, V_{GS}=0$	-	-	1.0	mA
Drain-Source Breakdown Voltage		$V(BR)_{DSS}$	$I_D=10mA, V_{GS}=0$	150	-	-	V
Gate Threshold Voltage		$V_{th}$	$V_{DS}=10V, I_D=1mA$	1.5	-	3.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS}=10V, I_D=10A$	3	6	-	S
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D=10A, V_{GS}=10V$	-	0.12	0.18	$\Omega$
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D=10A, V_{GS}=10V$	-	1.2	1.8	V
Input Capacitance		$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	1600	2200	pF
Reverse Transfer Capacitance		$C_{rss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	350	600	pF
Output Capacitance		$C_{oss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	800	1300	pF
Switching Time	Rise Time	$t_r$		-	120	260	ns
	Turn-on Time	$t_{on}$		-	150	300	ns
	Fall Time	$t_f$		-	120	240	ns
	Turn-off Time	$t_{off}$		-	300	600	ns