

TOSHIBA

2SD1525

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (DARLINGTON)

2SD1525

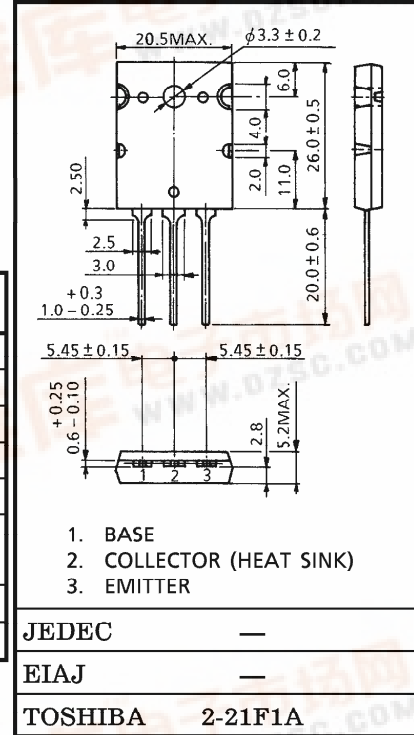
HIGH CURRENT SWITCHING APPLICATIONS

Unit in mm

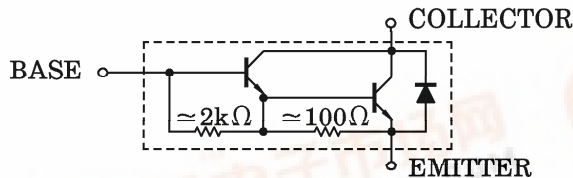
- High Collector Current : $I_C=30A$
- High DC Current Gain : $h_{FE(1)}=1000$ (Min.)
- Monolithic Construction with Built-In Base-Emitter Shunt Resistor.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	30	A
Base Current	I_B	5	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	150	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



EQUIVALENT CIRCUIT



Weight : 9.8g (Typ.)

961001FAA2

● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

● The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.

● The information contained herein is subject to change without notice.



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 100V, I _E = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V _{EB} = 5V, I _C = 0	—	—	10	mA
Collector-Emitter Breakdown Voltage		V _(BR) CEO	I _C = 50mA, I _B = 0	100	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} = 5V, I _C = 20A	1000	—	—	
		h _{FE} (2)	V _{CE} = 5V, I _C = 30A	200	—	—	
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 20A, I _B = 0.2A	—	—	1.5	V
Base-Emitter Saturation Voltage		V _{BE} (sat)		—	—	2.5	V
Emitter-Collector Forward Voltage		V _{ECF}	I _E = 10A, I _B = 0	—	—	3	V
Transition Frequency		f _T	V _{CE} = 5V, I _C = 1A	—	10	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	500	—	pF
Switching Time	Turn-on Time	t _{on}	<p>V_{CC} = 50V R = 10Ω I_{B1} I_{B2} DUTY CYCLE ≤ 1%</p>	—	1.5	—	μs
	Storage Time	t _{stg}		—	10	—	
	Fall Time	t _f		—	1.5	—	

