

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

# 2SA1924

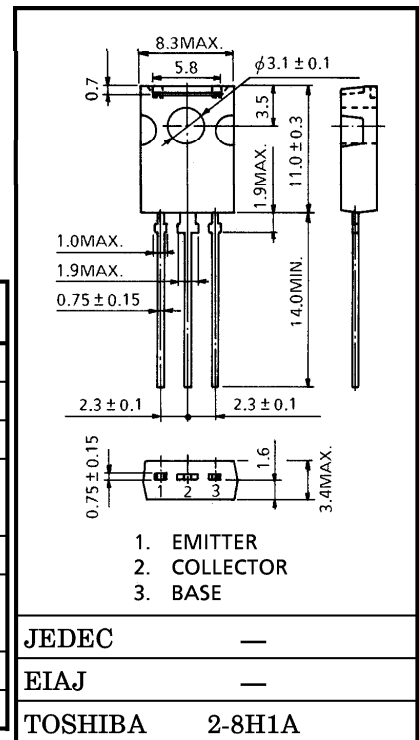
HIGH VOLTAGE SWITCHING APPLICATIONS.

Unit in mm

- High Voltage :  $V_{CEO} = -400V$
- Low Saturation Voltage :  $V_{CE(sat)} = -1V$  (Max.)  
( $I_C = -100mA, I_B = -10mA$ )
- Collector Metal (Fin) is Fully Covered with Mold Resin

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	-400	V
Collector-Emitter Voltage		$V_{CEO}$	-400	V
Emitter-Base Voltage		$V_{EBO}$	-7	V
Collector Current	DC	$I_C$	-0.5	A
	Pulse	$I_{CP}$	-1	
Base Current		$I_B$	-0.25	A
Collector Power Dissipation	$T_a = 25^\circ C$	$P_C$	1.5	W
	$T_c = 25^\circ C$		10	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$



ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Weight : 0.82g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = -400V, I_E = 0$	—	—	-10	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB} = -7V, I_C = 0$	—	—	-1	$\mu A$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-400	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = -5V, I_C = -20mA$	140	—	450	
		$h_{FE(2)}$	$V_{CE} = -5V, I_C = -100mA$	140	—	400	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$	—	-0.4	-1.0	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -100mA, I_B = -10mA$	—	-0.76	-0.9	
Transition Frequency		$f_T$	$V_{CE} = -5V, I_C = -50mA$	—	35	—	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	18	—	pF
Switching Time	Turn-on Time	$t_{on}$		—	0.2	—	$\mu s$
	Storage Time	$t_{stg}$		—	2.3	—	
	Fall Time	$t_f$		$I_{B1} = 10mA, I_{B2} = 20mA, DUTY\ CYCLE \le 1\%$	—	0.2	

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