

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

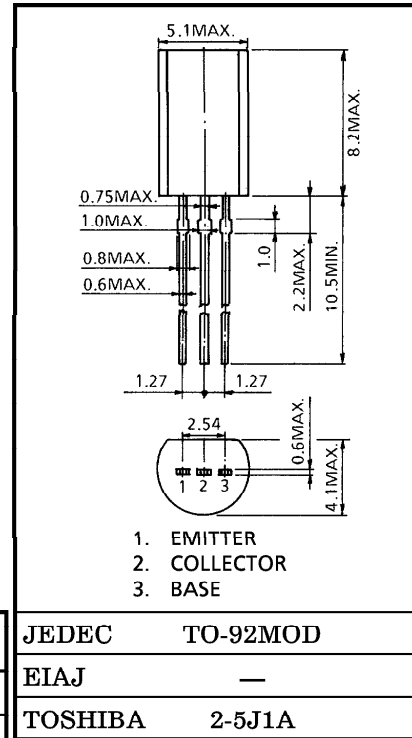
2SD2536

MICRO MOTOR DRIVE, HAMMER DRIVE APPLICATIONS.

SWITCHING APPLICATIONS.

- High DC Current Gain : $h_{FE} = 2000$ (Min.) ($V_{CE} = 2V, I_C = 1A$)
- Low Saturation Voltage : $V_{CE(sat)} = 1.2V$ (Max.) ($I_C = 0.7A, V_{BH} = 4.2V$)
- Zener Diode Included Between Collector and Base.

Unit in mm

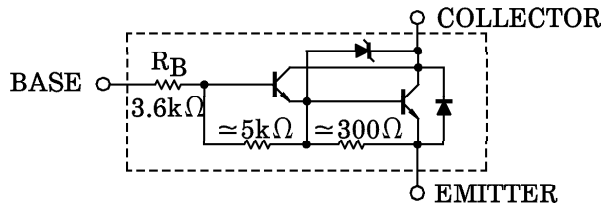


MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	85	V
Collector-Emitter Voltage	V_{CEO}	100 ± 15	V
Emitter-Base Voltage	V_{EBO}	6	V
Bias Voltage	V_B	20	V
Collector Current	I_C	2	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	0.9	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

Weight : 0.36g

EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 80V, I_E = 0$	—	—	10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 6V, I_C = 0$	0.3	—	1.5	mA
Collector-Emitter Breakdown Voltage		$V_{(BR) CEO}$	$I_C = 10mA, I_B = 0$	85	100	115	V
DC Current Gain		h_{FE}	$V_{CE} = 2V, I_C = 1A$	2000	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)(1)}$	$I_C = 0.7A, V_{BH} = 4.2V$	—	—	1.2	V
		$V_{CE(sat)(2)}$	$I_C = 1A, V_{BH} = 4.2V$	—	—	1.5	V
Base Resistance		R_B		2.5	3.6	4.7	k Ω
Collector Output Capacitance		C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	20	—	pF
Unclamped Inductive Load Energy		E_S / B	$L = 10mH, I_C = 1.3A, V_{BH} = 10V$	5	—	—	mJ
Switching Time	Turn-on Time	t_{on}	<p> $20\mu s$ INPUT OUTPUT 30Ω $V_{BH} = 5V$ $DUTY\ CYCLE \leq 1\%$ $V_{CC} = 30V$ </p>	—	0.3	—	μs
	Storage Time	t_{stg}		—	4.0	—	
	Fall Time	t_f		—	0.6	—	