

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

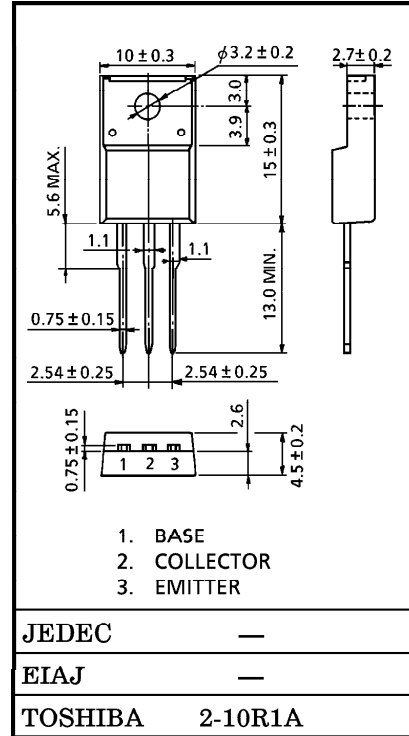
2SD1407A

POWER AMPLIFIER APPLICATIONS

- High Breakdown Voltage : $V_{CEO} = 100V$
- Low Collector Saturation Voltage : $V_{CE(sat)} = 2.0V$ (Max.)
- Complementary to 2SB1016A

INDUSTRIAL APPLICATIONS

Unit in mm



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	5	A
Base Current	I_B	0.5	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	30	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 100V, I_E = 0$	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	1	mA
Collector-Emitter Breakdown Voltage	$V(BR)_{CEO}$	$I_C = 50mA, I_B = 0$	100	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = 5V, I_C = 1A$	40	—	240	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 4A$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A, I_B = 0.4A$	—	—	2.0	V
Base-Emitter Saturation Voltage	V_{BE}	$V_{CE} = 5V, I_C = 1A$	—	—	1.5	V
Transition Frequency	f_T	$V_{CE} = 5V, I_C = 1A$	—	12	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	100	—	pF

(Note) $h_{FE(1)}$ Classification R : 40~80, O : 70~140, Y : 120~240

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