

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5242

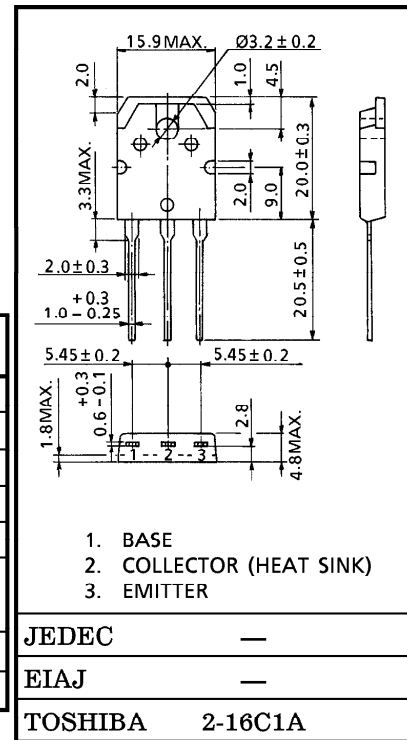
POWER AMPLIFIER APPLICATIONS

Unit in mm

- High Collector Breakdown Voltage : $V_{CEO} = 230V$ (Min.)
- Complementary to 2SA1962
- Recommend for 80W High Fidelity Audio Frequency Amplifier Output Stage.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	230	V
Collector-Emitter Voltage	V_{CEO}	230	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	15	A
Base Current	I_B	1.5	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	130	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55~150	$^\circ C$



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

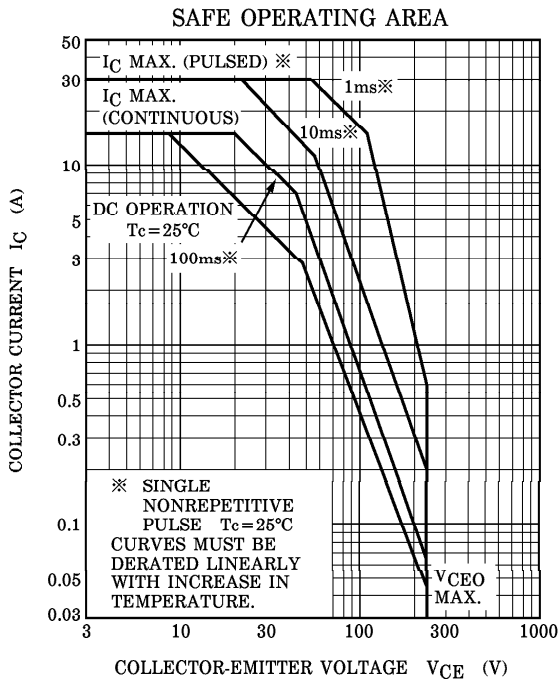
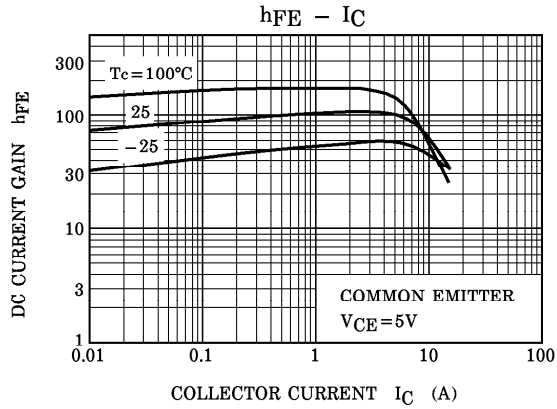
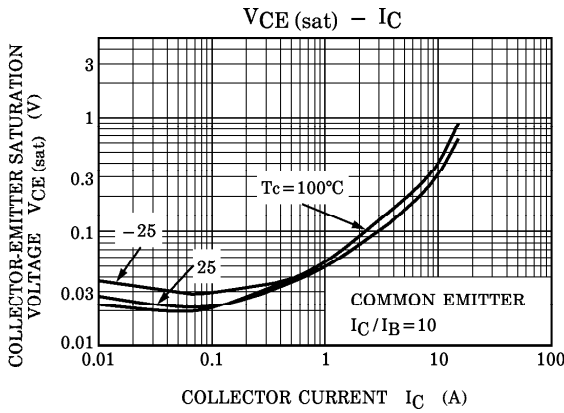
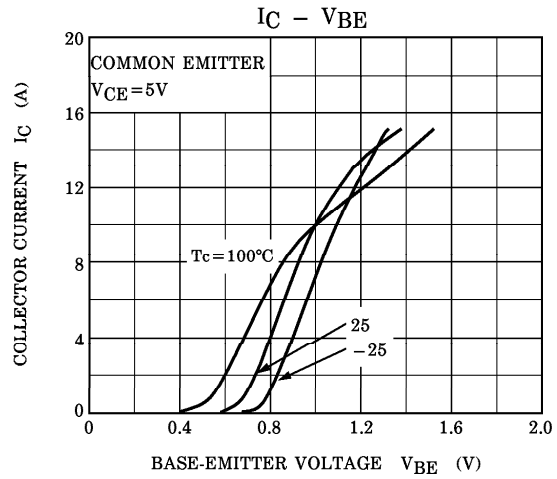
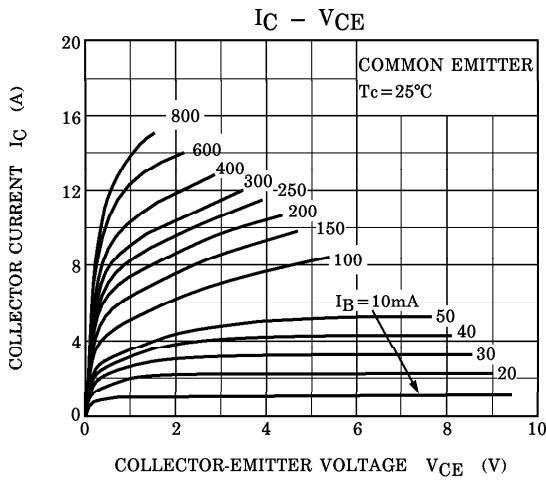
Weight : 4.7g (Typ.)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 230V, I_E = 0$	—	—	5.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR) CEO}$	$I_C = 50mA, I_B = 0$	230	—	—	V
DC Current Gain	$h_{FE} (1)$ (Note)	$V_{CE} = 5V, I_C = 1A$	55	—	160	
	$h_{FE} (2)$	$V_{CE} = 5V, I_C = 7A$	35	60	—	
Collector-Emitter Saturation Voltage	$V_{CE (sat)}$	$I_C = 8A, I_B = 0.8A$	—	0.4	3.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5V, I_C = 7A$	—	1.0	1.5	V
Transition Frequency	f_T	$V_{CE} = 5V, I_C = 1A$	—	30	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	200	—	pF

Note : $h_{FE} (1)$ Classification R : 55~110, O : 80~160

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TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

2SA1962

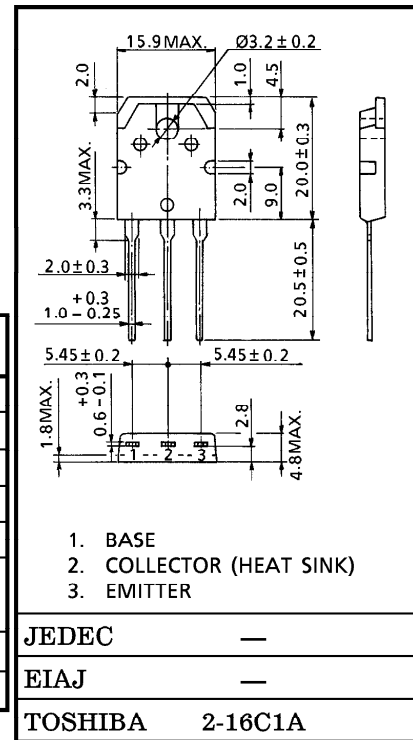
POWER AMPLIFIER APPLICATIONS

Unit in mm

- High Collector Voltage : $V_{CEO} = -230V$ (Min.)
- Complementary to 2SC5242
- Recommend for 80W High Fidelity Audio Frequency Amplifier Output Stage.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-230	V
Collector-Emitter Voltage	V_{CEO}	-230	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-15	A
Base Current	I_B	-1.5	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	130	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



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

Weight : 4.7g (Typ.)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -230V, I_E = 0$	—	—	-5.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$	—	—	-5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR) CEO}$	$I_C = -50mA, I_B = 0$	-230	—	—	V
DC Current Gain	$h_{FE} (1)$ (Note)	$V_{CE} = -5V, I_C = -1A$	55	—	160	
	$h_{FE} (2)$	$V_{CE} = -5V, I_C = -7A$	35	60	—	
Collector-Emitter Saturation Voltage	$V_{CE (sat)}$	$I_C = -8A, I_B = -0.8A$	—	-1.5	-3.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5V, I_C = -7A$	—	-1.0	-1.5	V
Transition Frequency	f_T	$V_{CE} = -5V, I_C = -1A$	—	30	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	360	—	pF

Note : $h_{FE} (1)$ Classification R : 55~110, O : 80~160

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