

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

# 2SC5242

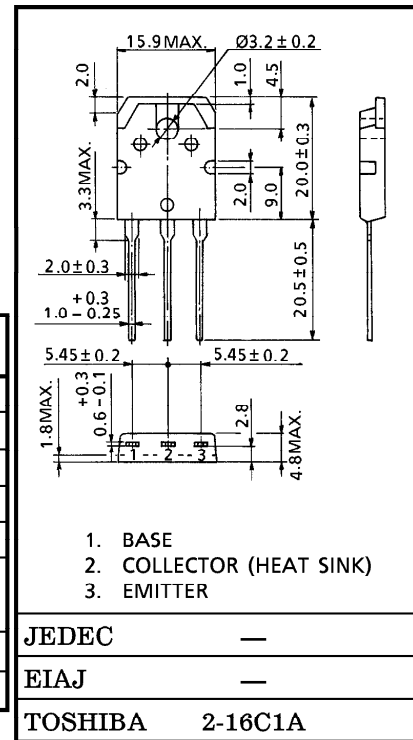
POWER AMPLIFIER APPLICATIONS

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	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	—	—	5.0	$\mu A$
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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