

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

# 2SB1642

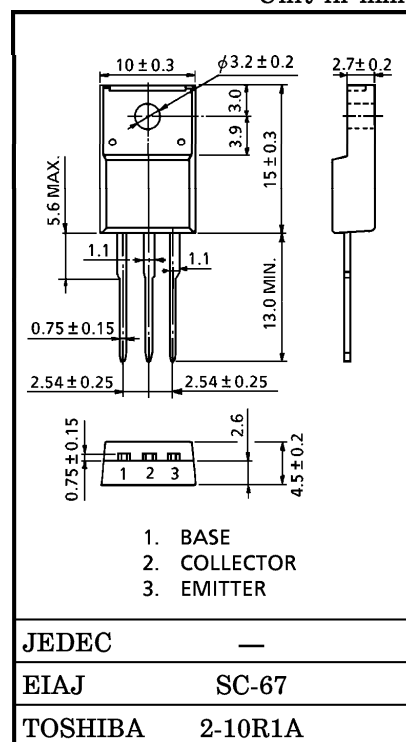
AUDIO FREQUENCY POWER AMPLIFIER APPLICATIONS

Unit in mm

- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -1.5V$  (Max.) ( $I_C = -2.5A, I_B = -0.25A$ )
- Collector Power Dissipation :  $P_C = 25W$  ( $T_c = 25^\circ C$ )
- Collector Metal (Fin) is Fully Covered with Mold Resin

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-7	V
Collector Current	$I_C$	-4	A
Base Current	$I_B$	-1	A
Collector Power Dissipation	$P_C$	$T_a = 25^\circ C$	2.0
		$T_c = 25^\circ C$	25
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	$I_{CBO}$	$V_{CB} = -60V, I_E = 0$	—	—	-10	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -7V, I_C = 0$	—	—	-10	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -5V, I_C = -0.5A$	100	—	320	
	$h_{FE(2)}$	$V_{CE} = -5V, I_C = -3A$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2.5A, I_B = -0.25A$	—	-0.7	-1.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -5V, I_C = -0.5A$	—	-0.75	-1.0	V
Transition Frequency	$f_T$	$V_{CE} = -5V, I_C = -0.5A$	—	9	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	50	—	pF

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