

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

# 2SC3423

## Audio Frequency Amplifier Applications

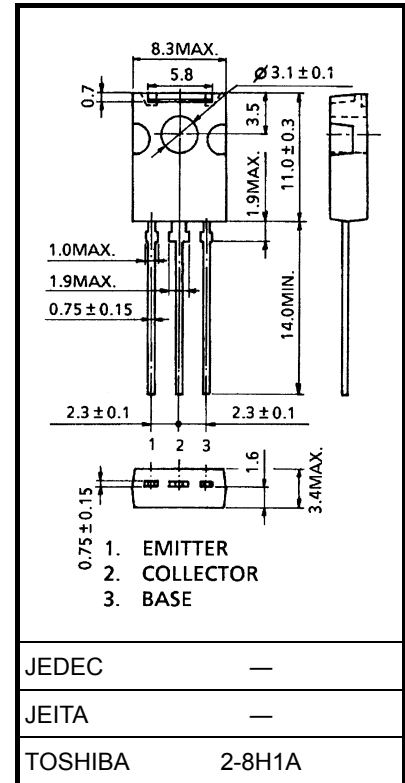
- Complementary to 2SA1360
- Small collector output capacitance:  $C_{ob} = 1.8 \text{ pF}$  (typ.)
- High transition frequency:  $f_T = 200 \text{ MHz}$  (typ.)

## Absolute Maximum Ratings ( $T_c = 25^\circ\text{C}$ )

Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	150	V
Collector-emitter voltage		$V_{CEO}$	150	V
Emitter-base voltage		$V_{EBO}$	5	V
Collector current		$I_C$	50	mA
Base current		$I_B$	5	mA
Collector power dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.2	W
	$T_c = 25^\circ\text{C}$		5	
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	-55 to 150	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm



Weight: 0.82 g (typ.)

## Electrical Characteristics (Tc = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 150\text{ V}, I_E = 0$	—	—	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	0.1	$\mu\text{A}$
DC current gain	$h_{FE}$ (Note)	$V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$	80	—	240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	—	—	1.0	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$	—	—	0.8	V
Transition frequency	$f_T$	$V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$	—	200	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	1.8	—	pF

Note:  $h_{FE}$  classification O: 80 to 160, Y: 120 to 240

## Marking

