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# 2SD2423

Silicon NPN Epitaxial, Darlington

# HITACHI

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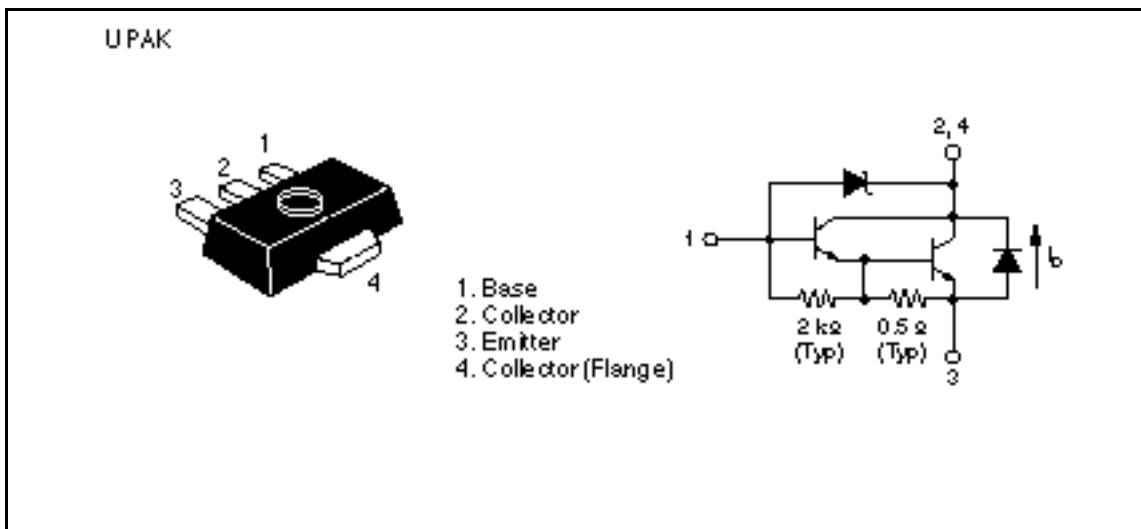
## Application

Low frequency power amplifier

## Features

The transistor with a built-in zener diode of surge absorb.

## Outline



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### Absolute Maximum Ratings (Ta = 25°C)

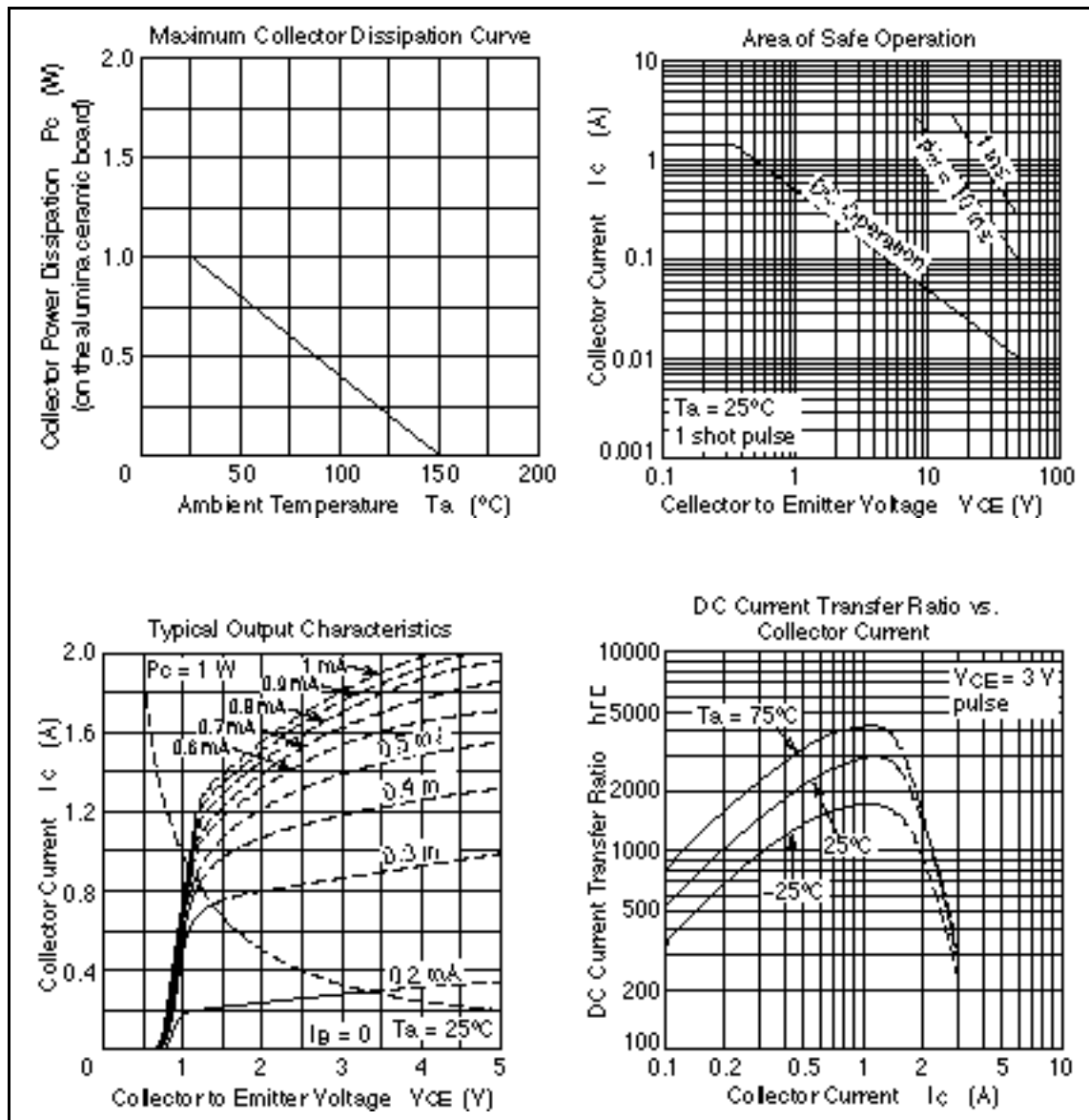
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	50	V
Collector to emitter voltage	$V_{CEO}$	50	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	1.5	A
Collector power dissipation	$P_C^{*1}$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C
Collector to emitter diode forward current	$I_D$	1.5	A

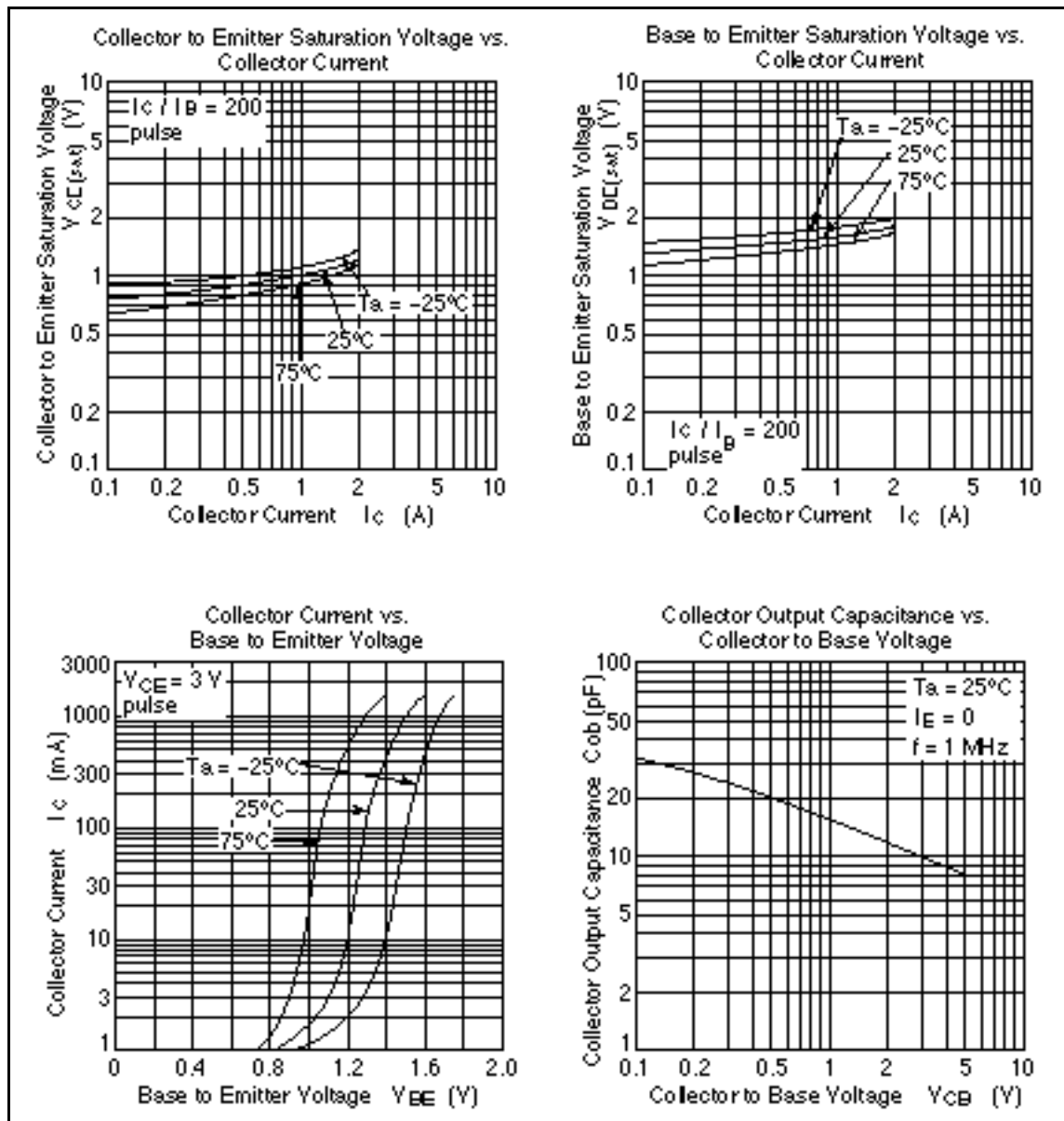
Note: 1. When using the ceramic board 0.7 mm thick (12.5 mm x 20 mm).

### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	70	V	$I_C = 100 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	$I_C = 10 \text{ mA}, R_{BE} =$
Collector to emitter sustaining voltage	$V_{CEO(sus)}$	50	—	70	V	$I_C = 1.5 \text{ A}, R_{BE} =$ , $L = 10 \text{ mH}^{*1}$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 50 \text{ mA}, I_C = 0$
Collector cutoff current	$I_{CEO}$	—	—	10	$\mu A$	$V_{CE} = 40 \text{ V}, R_{BE} =$
DC current transfer ratio	$h_{FE}$	2000	—	10000		$V_{CE} = 3 \text{ V}, I_C = 1 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	1.5	V	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)2}$	—	—	2.3	V	$I_C = 1.5 \text{ A}, I_B = 1.5 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	2.0	V	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)2}$	—	—	2.5	V	$I_C = 1.5 \text{ A}, I_B = 1.5 \text{ mA}^{*1}$
Emitter to collector diode forward voltage	$V_D$	—	—	3.5	V	$I_D = 1.5 \text{ A}^{*1}$

Notes: 1. Pulse test  
2. Marking is "GT".





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