

# 2SC2899

Silicon NPN Triple Diffused

# HITACHI

## Application

High speed and high voltage switching

## Outline

TO-126 MOD



1. Emitter  
2. Collector  
3. Base

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

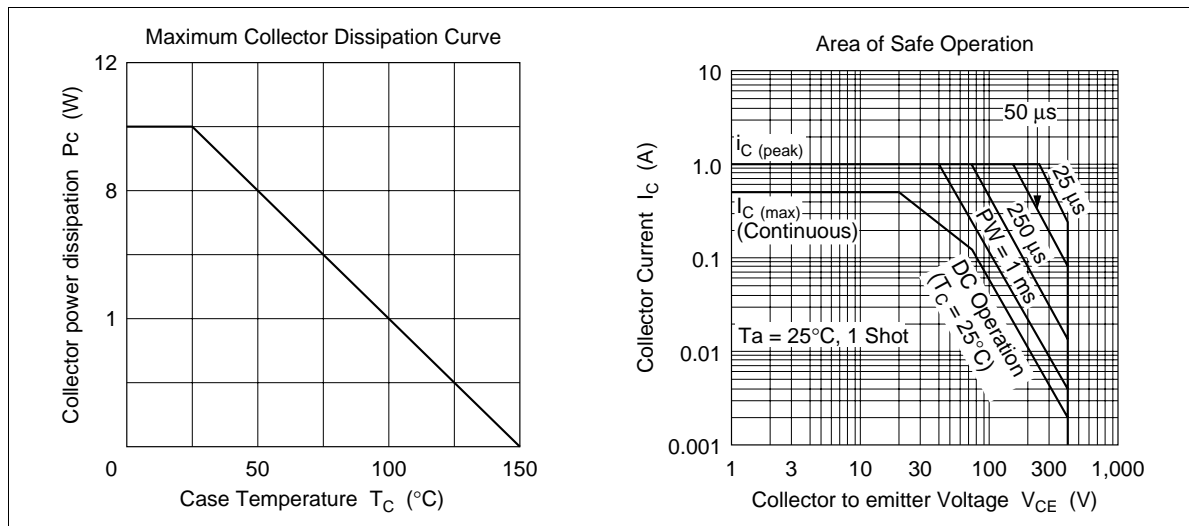
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	500	V
Collector to emitter voltage	$V_{CEO}$	400	V
Emitter to base voltage	$V_{EBO}$	10	V
Collector current	$I_C$	0.5	A
Collector peak current	$I_{C(peak)}$	1.0	A
Collector power dissipation	$P_C$	0.75	W
	$P_C^{*1}$	10	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

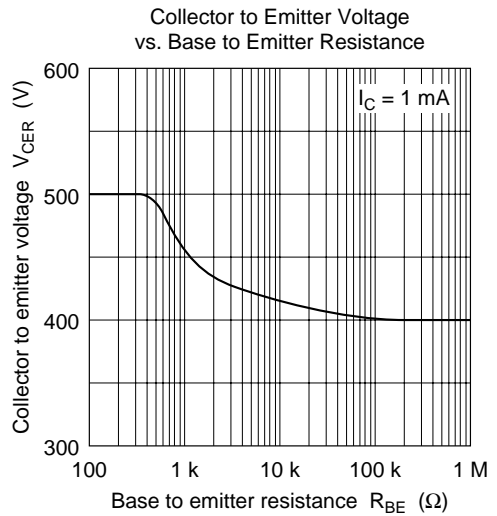
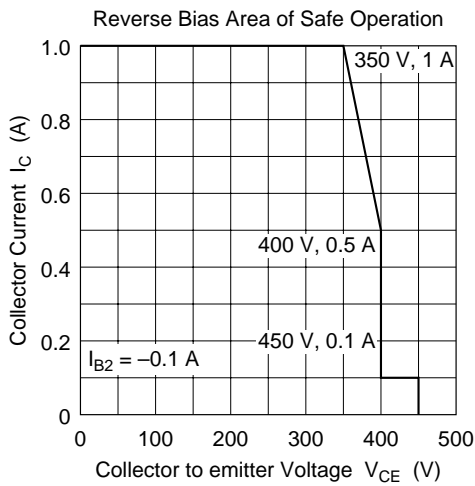
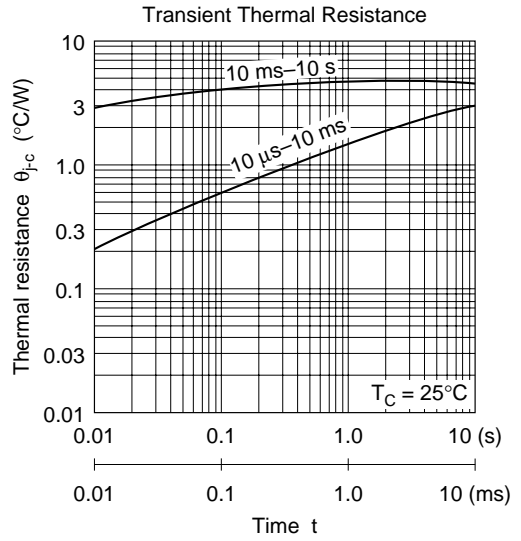
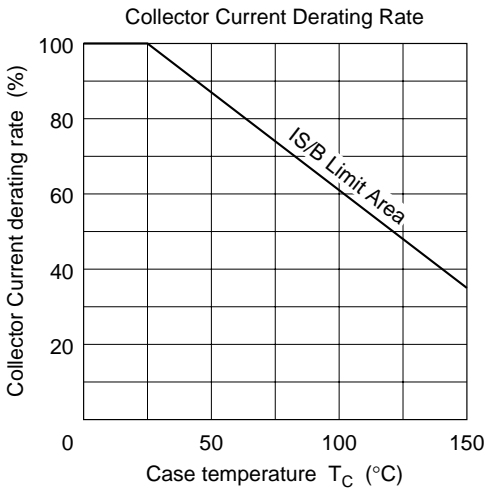
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

## Electrical Characteristics (Ta = 25°C)

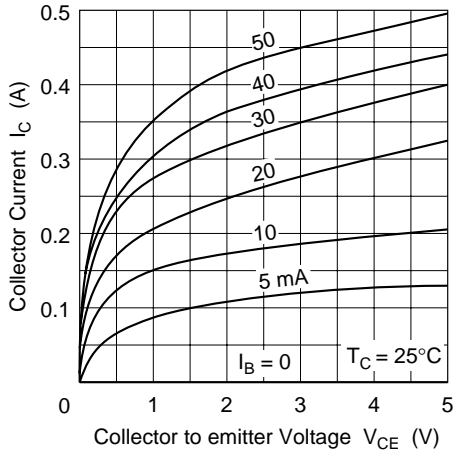
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter sustain voltage	$V_{CEO(sus)}$	400	—	—	V	$I_C = 0.1\text{ A}$ , $R_{BE} = \infty$ , $L = 100\text{ mH}$
	$V_{CEX(sus)}$	400	—	—	V	$I_C = 0.5\text{ A}$ , $I_{B1} = -I_{B2} = 0.1\text{ A}$ , $V_{BE} = -5\text{ V}$ , $L = 180\text{ }\mu\text{H}$ , Clamped
Emitter to base breakdown voltage	$V_{(BR)EBO}$	10	—	—	V	$I_E = 10\text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	20	$\mu\text{A}$	$V_{CB} = 400\text{ V}$ , $I_C = 0$
	$I_{CEO}$	—	—	50	$\mu\text{A}$	$V_{CE} = 350\text{ V}$ , $R_{BE} = \infty$
DC current transfer ratio	$h_{FE1}$	15	—	—		$V_{CE} = 5\text{ V}$ , $I_C = 0.25\text{ A}^{*1}$
	$h_{FE2}$	7	—	—		$V_{CE} = 5\text{ V}$ , $I_C = 0.5\text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 0.25\text{ A}$ , $I_B = 0.05\text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	
Turn on time	$t_{on}$	—	—	1.0	$\mu\text{s}$	$I_C = 0.5\text{ A}$ , $I_{B1} = -I_{B2} = 0.1\text{ A}$ ,
Storage time	$t_{stg}$	—	—	2.0	$\mu\text{s}$	$V_{CC} \cong 150\text{ V}$
Fall time	$t_f$	—	—	1.0	$\mu\text{s}$	

Note: 1. Pulse test

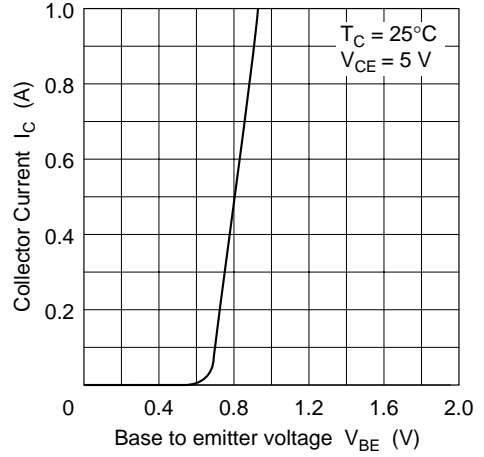




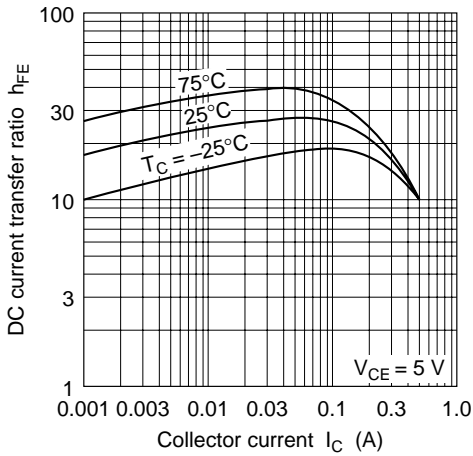
Typical Output Characteristics



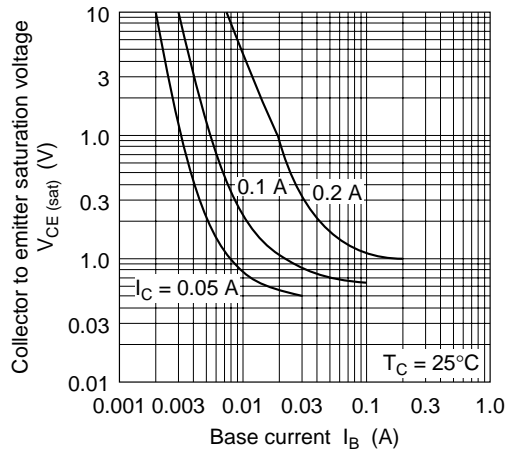
Typical Transfer Characteristics

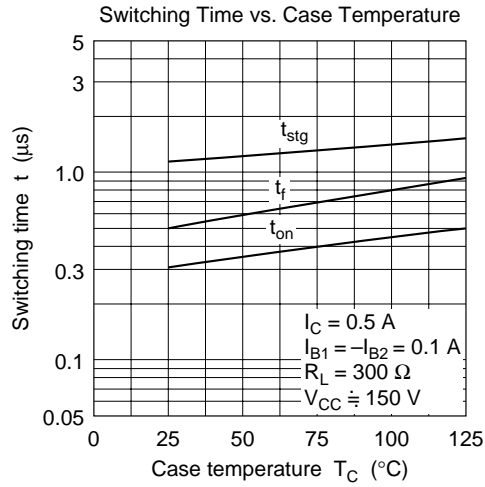
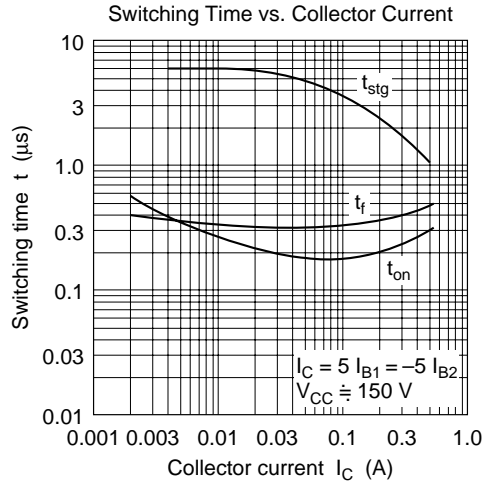
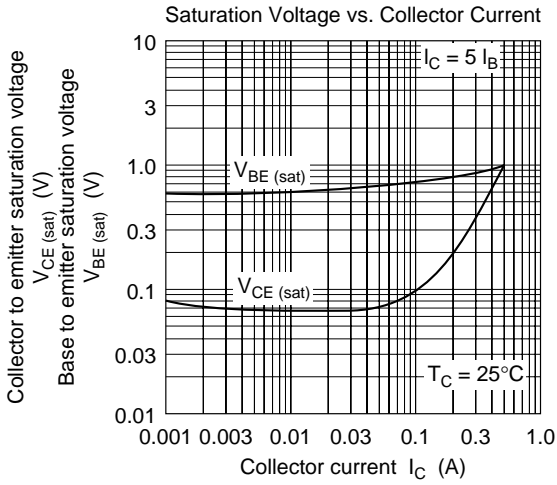


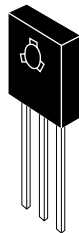
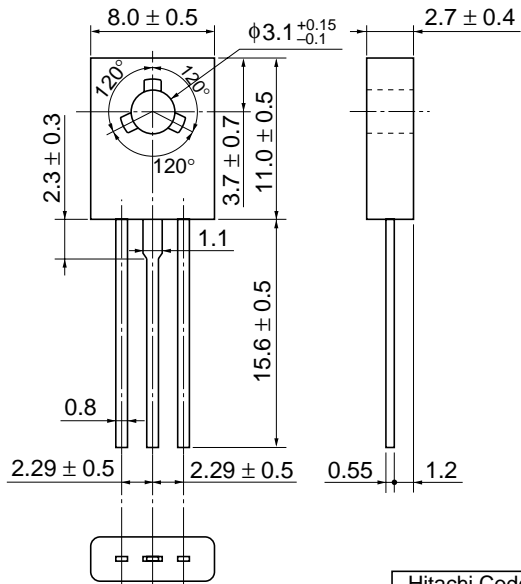
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Base Current







Hitachi Code	TO-126 Mod
JEDEC	—
EIAJ	—
Weight (reference value)	0.67 g

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