2SC5470

Silicon NPN Triple Diffused
Character Display Horizontal Deflection Output

HITACHI

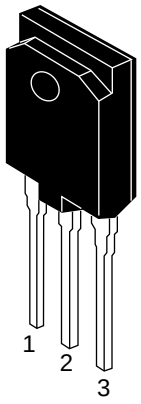
ADE-208-672 (Z)
1st. Edition
Oct. 1, 1998

Features

- High breakdown voltage
  V_{CBO} = 1500 V
- High speed switching
  tf = 0.15 μsec(typ.) at fH=64kHz

Outline

TO–3PFM



1. Base
2. Collector
3. Emitter

Absolute Maximum Ratings (Ta = 25°C)

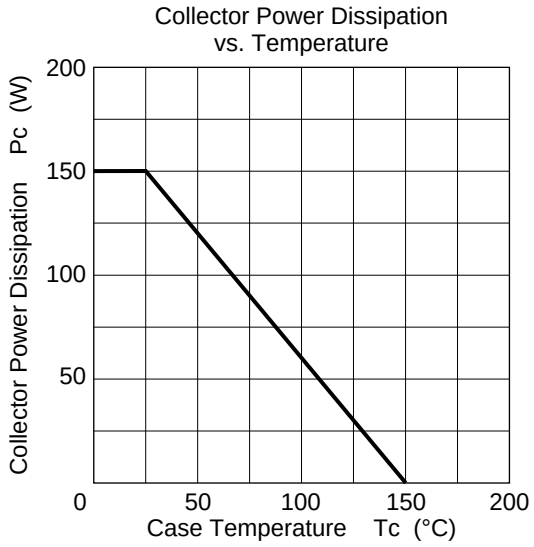
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	1500	V
Collector to emitter voltage	V_{CEO}	700	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	20	A
Collector peak current	$i_{c(peak)}$	40	A
Collector power dissipation	P_C Note1	150	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

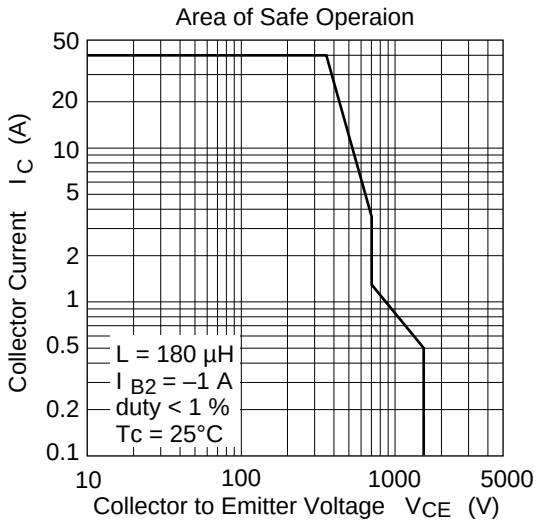
Note: 1. Value at Tc = 25°C

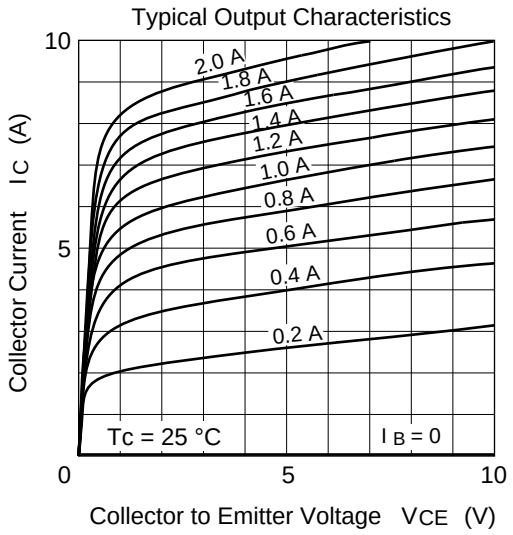
Electrical Characteristics (Ta = 25°C)

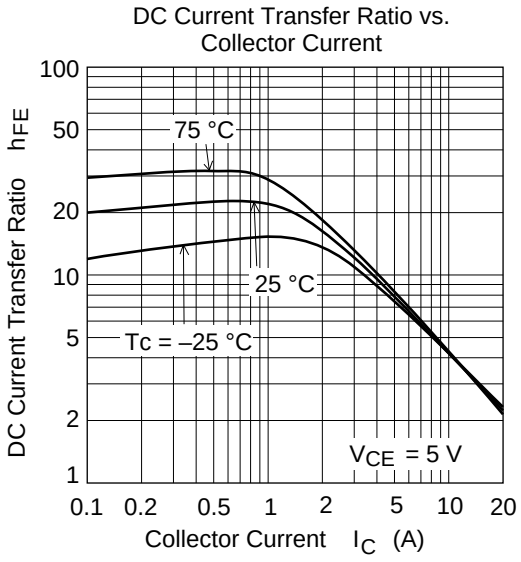
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	700	—	—	V	I_C = 10mA, R_{BE} = •
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 10mA, I_C = 0
Collector cutoff current	I_{CES}	—	—	500	µA	V_{CE} = 1500V, R_{BE} = 0
DC current transfer ratio	h_{FE1}	10	—	40		V_{CE} = 5 V, I_C = 1A
DC current transfer ratio	h_{FE2}	3.5	—	6.5		V_{CE} = 5 V, I_C = 10A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	I_C = 12A, I_B = 4A
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	I_C = 12A, I_B = 4A
Fall time	t_f	—	0.2	0.4	µs	I_{CP} = 8A, I_{B1}= 3A f_H = 31.5kHz
Fall time	t_f	—	0.15	—	µs	I_{CP} = 8A, I_{B1}= 2A f_H = 64kHz

Main Characteristics

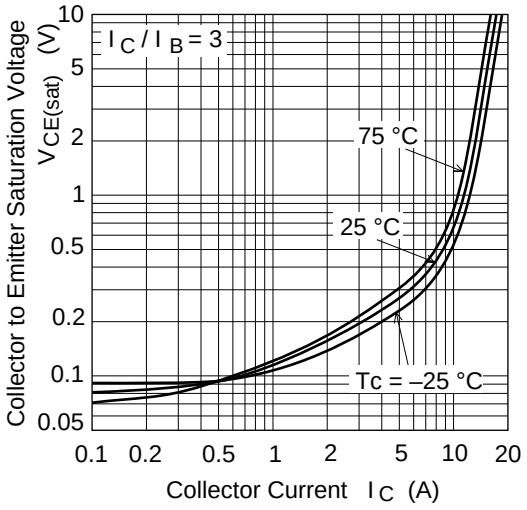




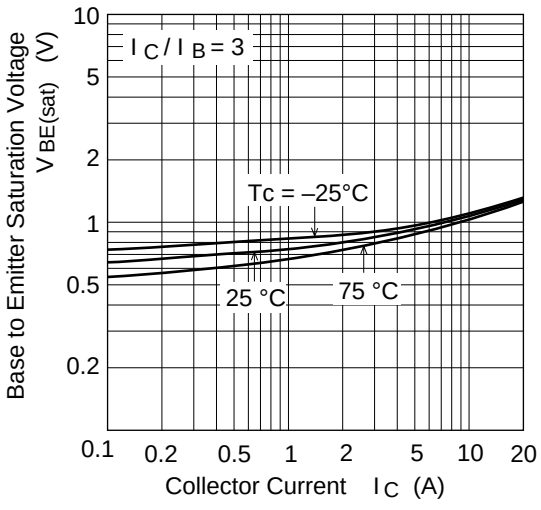




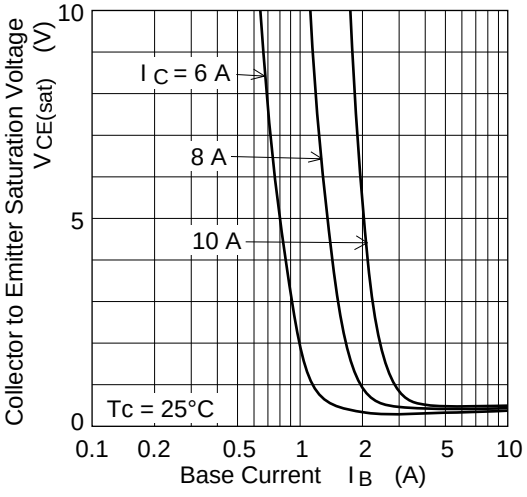
Collector to Emitter Saturation Voltage vs. Collector Current



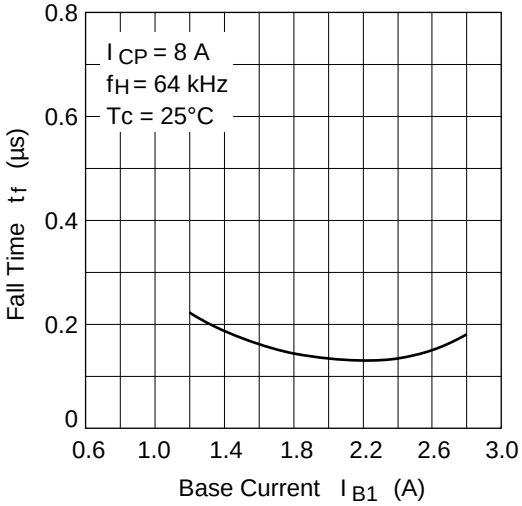
Base to Emitter Saturation Voltage vs. Collector Current

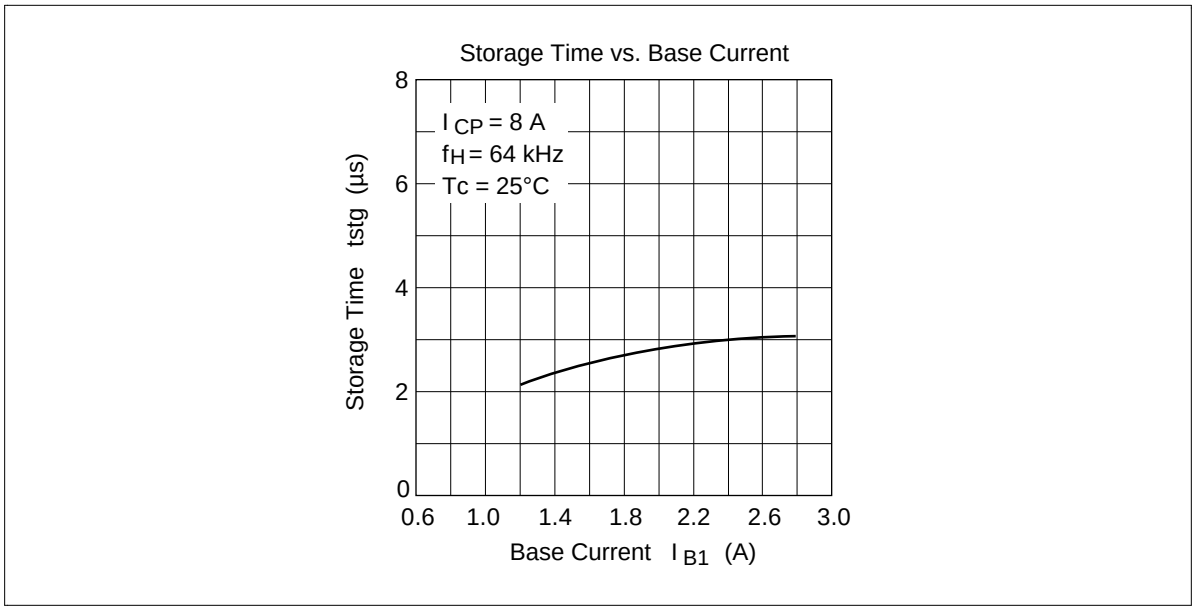


Collector to Emitter Saturation Voltage vs. Base Current

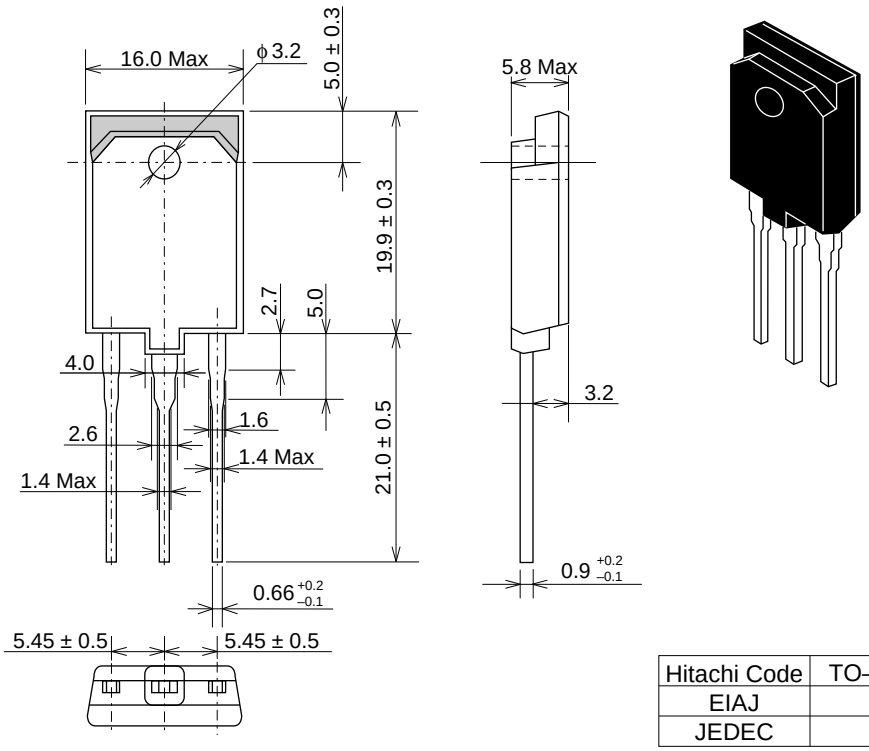


Fall Time vs. Base Current




Storage Time vs. Base Current
I CP = 8 A
fH = 64 kHz
Tc = 25°C
Storage Time tstg (µs)
Base Current I B1 (A)
0
2
4
6
8
0.6
1.0
1.4
1.8
2.2
2.6
3.0

Package Dimensions (Unit: mm)



Hitachi Code	TO–3PFM
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