2SC5250

Silicon NPN Triple Diffused Planar

HITACHI

Preliminary

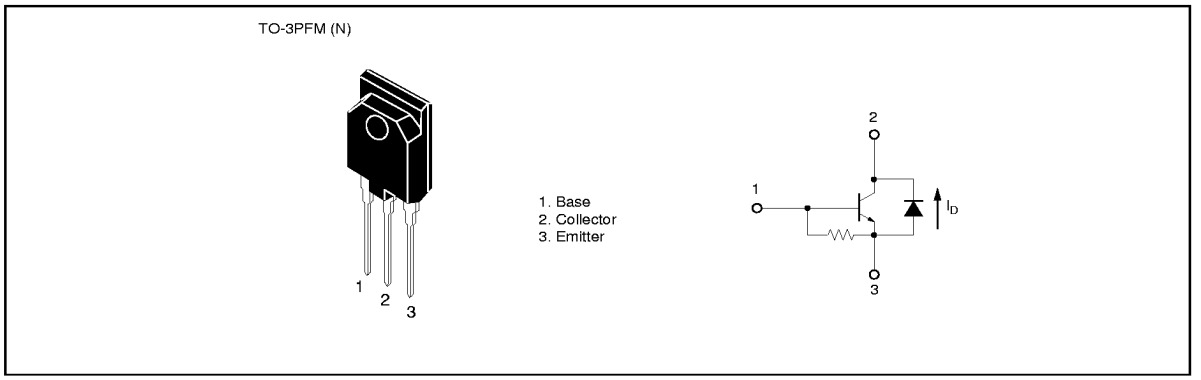
Application

Character display horizontal deflection output

Features

- High breakdown voltage
  V_{CBO} = 1500 V
- High speed switching
  t_f = 0.2 µsec (typ)
- Built-in damper diode type
- Isolated package
  TO-3P•FM (N)

Outline



Absolute Maximum Ratings (Ta = 25°C)

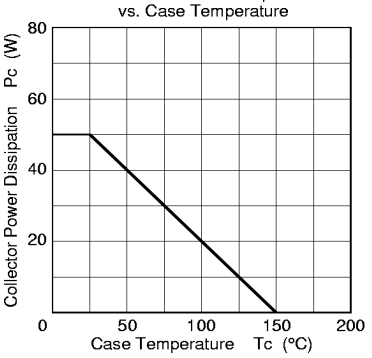
Item	Symbol	Ratings	Unit
Collector to emitter voltage	V_{CES}	1500	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	8	A
Collector peak current	$I_{C(peak)}$	16	A
Collector power dissipation	P_C*[1]	50	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C
Diode current	I_D	8	A

Note: 1. Value at T_C = 25°C

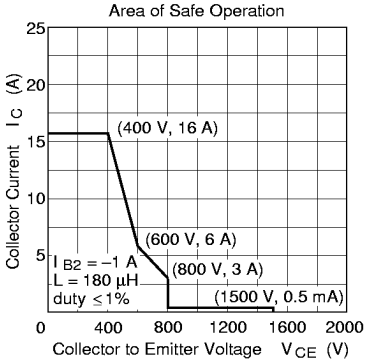
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 400 mA, I_C = 0
Collector cutoff current	I_{CES}	—	—	500	µA	V_{CE} = 1500 V, R_{BE} = 0
DC current transfer ratio	h_{FE1}	6	—	25		V_{CE} = 5 V, I_C = 1 A
DC current transfer ratio	h_{FE2}	4	—	7		V_{CE} = 5 V, I_C = 5 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	I_C = 5 A, I_B = 1.25 A
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	I_C = 5 A, I_B = 1.25 A
Forward voltage of damper diode	V_{ECF}	—	—	2	V	I_F = 8 A
Fall time	t_f	—	0.2	0.4	µsec	I_{CP} = 5 A, I_{B1} = 1 A, f_H = 31.5 kHz

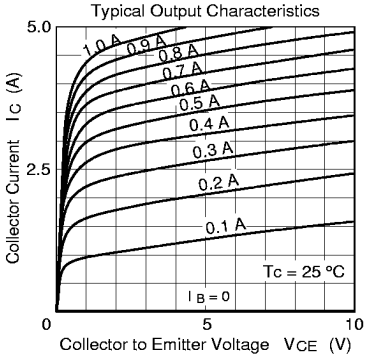
Collector Power Dissipation vs. Case Temperature



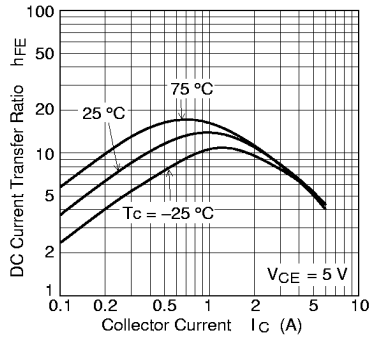
Area of Safe Operation



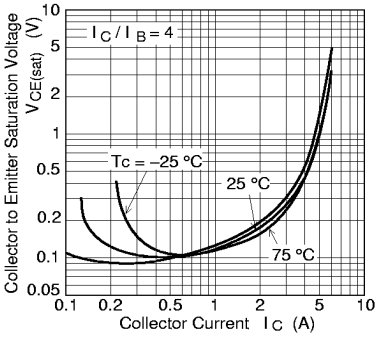
Typical Output Characteristics



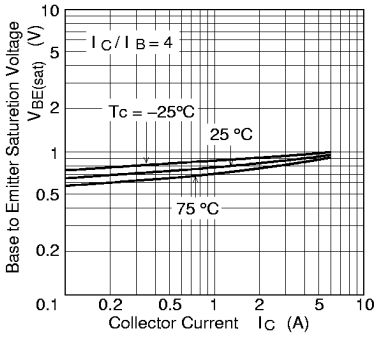
DC Current Transfer Ratio
vs. Collector Current



Collector to Emitter Saturation Voltage
vs. Collector Current



Base to Emitter Saturation Voltage
vs. Collector Current



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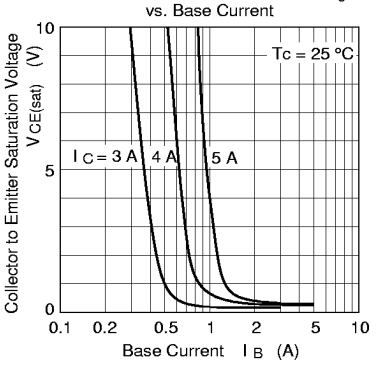
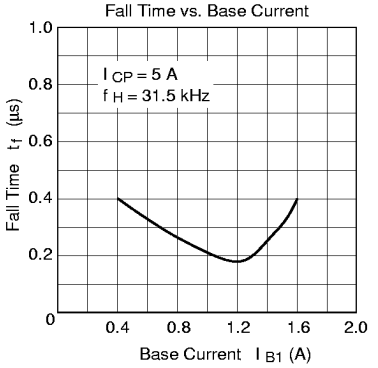
Collector to Emitter Saturation Voltage vs. Base Current



Fall Time vs. Base Current



Storage Time vs. Base Current