HITACHI

2SC4963

Silicon NPN Triple Diffused

Application

TV / character display holizontal diflection output

Features

- High breakdown voltage
  V_{CES} = 1700 V
- Built–in damper diode type
- Isolated package
  TO–3PFM

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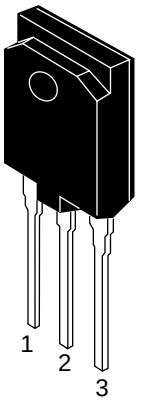
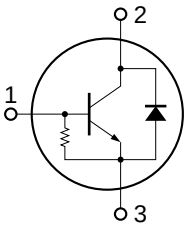


1. Base
2. Collector
3. Emitter



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to emitter voltage	V_{CES}	1700	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	8	A
Collector surge current	ic(surge)	20	A
Collector power dissipation	P_C*1	50	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C
C to E diode forward current	I_D	8	A

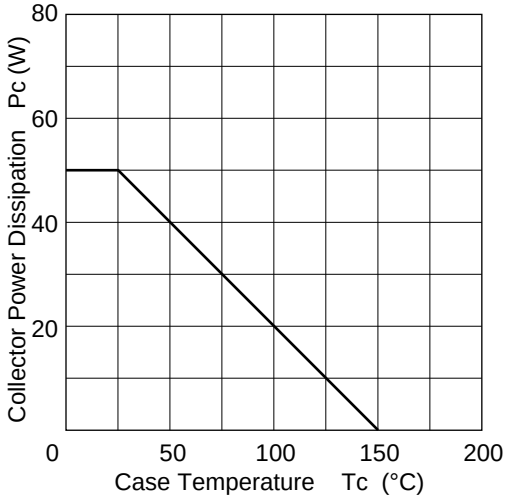
Note: 1. Value at T_C = 25°C.

2SC4963

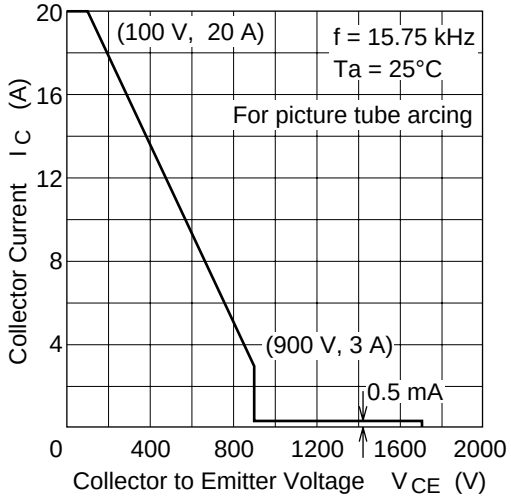
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 500 mA, I_C = 0
Collector cutoff current	I_{CES}	—	—	500	µA	V_{CE} = 1700 V, R_{BE} = 0
DC current transfer ratio	h_{FE}	—	—	25		V_{CE} = 5 V, I_C = 1 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	I_C = 7 A, I_B = 1.4 A
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	I_C = 7 A, I_B = 1.4 A
C to E diode forward voltage	V_{ECF}	—	—	2.0	V	I_F = 8 A
Fall time	t_f	—	—	0.6	µs	I_{CP} = 7 A, I_{B1} = 1.4 A, $I_{B2} \approx -2.5$ A, f_H = 15.75 kHz

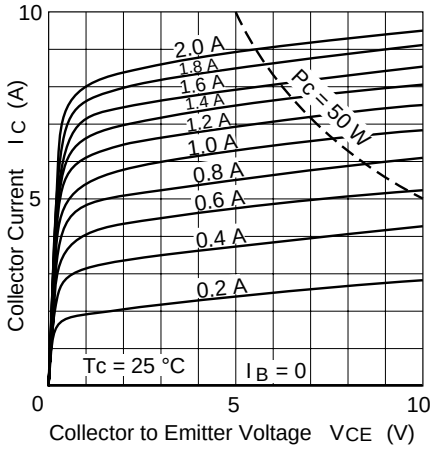
Maximum Collector Power Dissipation Curve



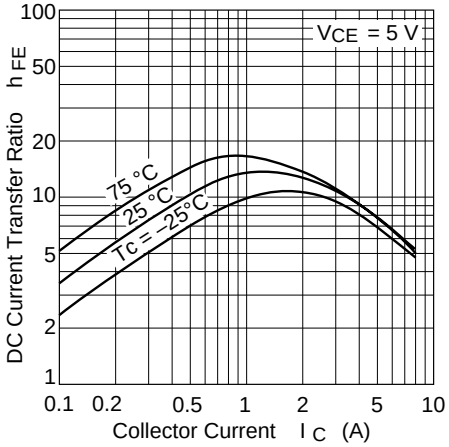
Area of Safe Operation



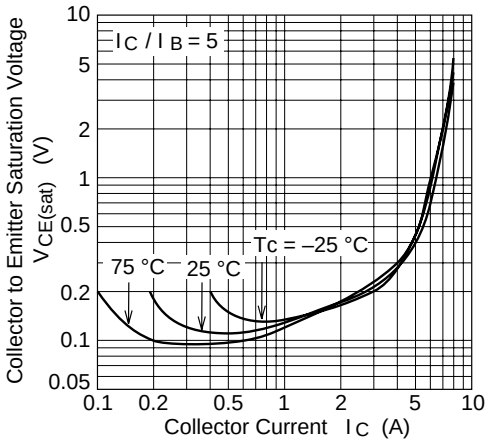
Typical Output Characteristics



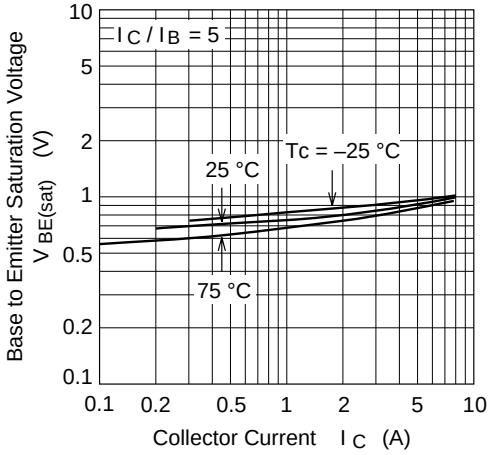
DC Current Transfer Ratio
vs. Collector Current



Collector to Emitter Saturation Voltage
vs. Collector Current



Base to Emitter Saturation Voltage
vs. Collector Current



2SC4963

Collector to Emitter Saturation Voltage
vs. Base Current