

2SD974

Silicon NPN Epitaxial

HITACHI

Application

- Power switching
- TV horizontal deflection output

Outline

TO-92MOD



1. Emitter
2. Collector
3. Base

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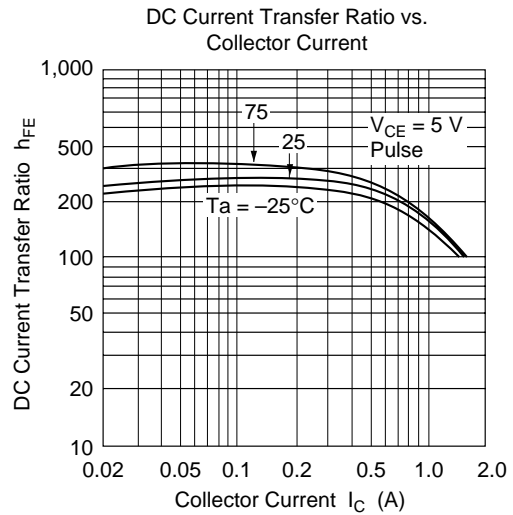
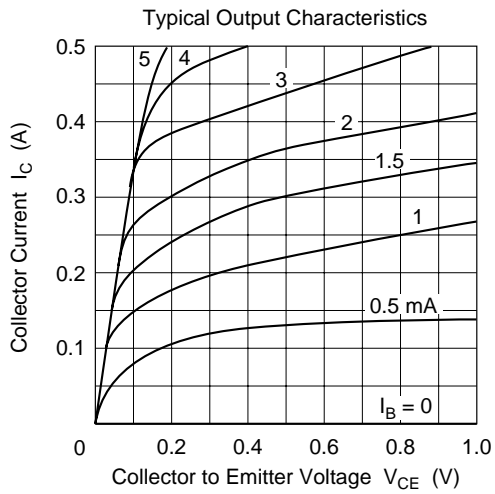
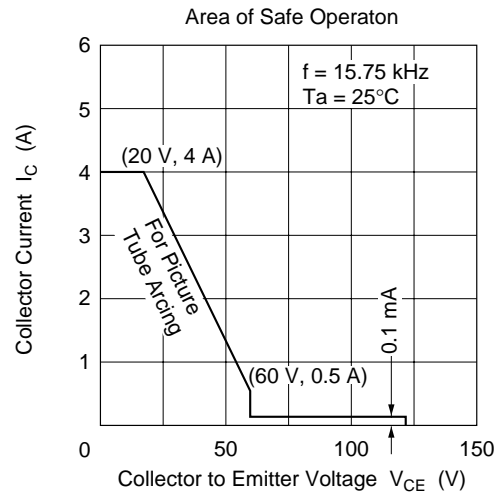
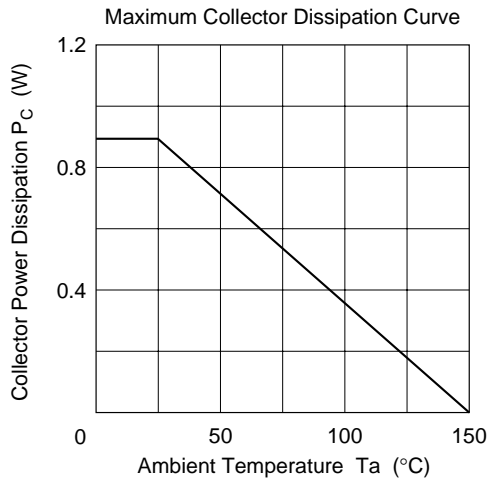
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Collector peak current	$i_{C(peak)}$	1.5	A
Surge collector current	$I_{C(surge)}$	4	A
Collector power dissipation	P_C	0.9	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

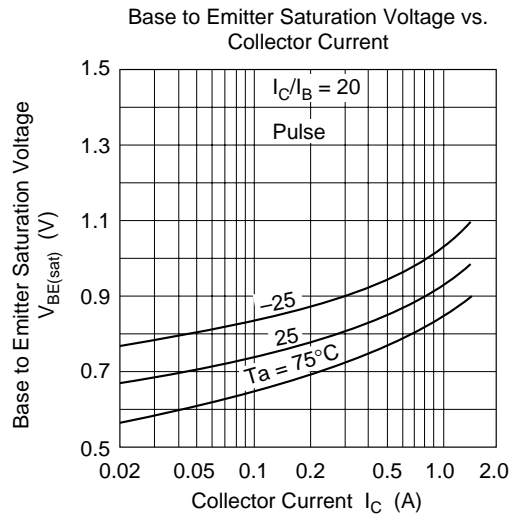
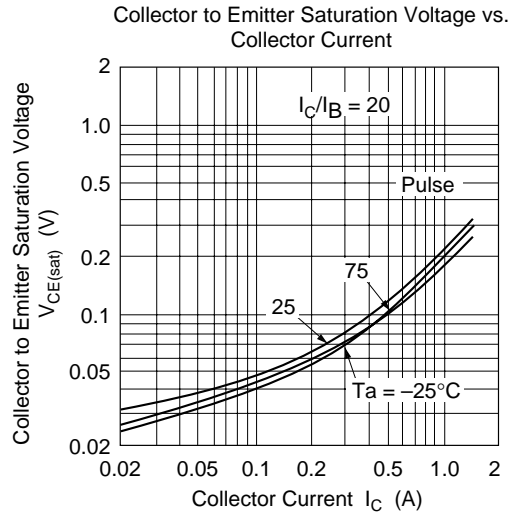
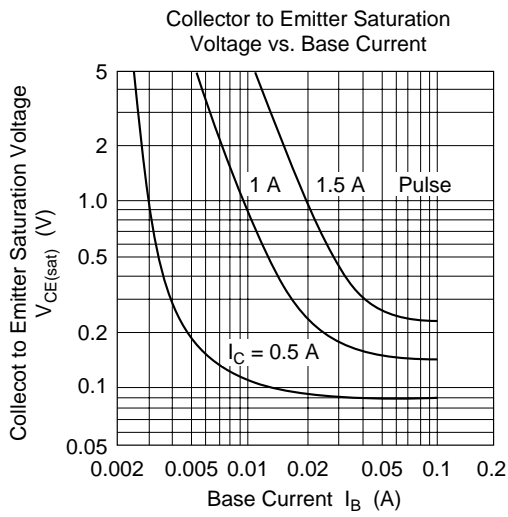
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	120	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	$I_C = 1 mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 100 V, I_E = 0$
DC current transfer ratio	h_{FE}	150	—	—		$V_{CE} = 5 V, I_C = 1 A^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	$I_C = 1 A, I_B = 0.05 A^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	MHz	
Fall time	t_f	—	0.4	—	pF	$I_{CP} = 1 A, I_{B1} = -I_{B2} = 50 mA^{*1}$

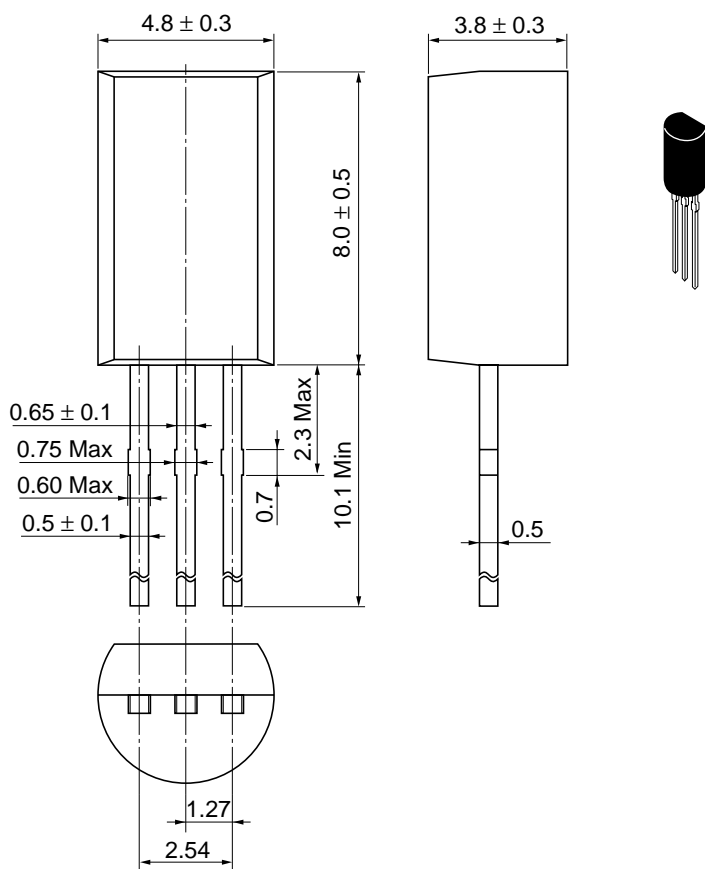
Note: 1. Pulse test



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Unit: mm



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