2SC949D

NPN General Purpose Switching Transistor

Voltage	200V	Current	3A

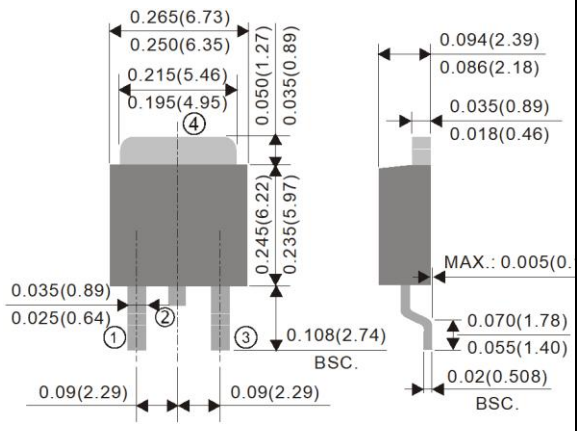
Features

- NPN epitaxial Silicon, Planar Design
- Collector-emitter voltage VCE = 200V
- High collector current = 3A
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

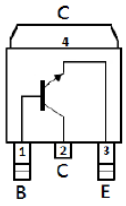
Mechanical Data

- Case: TO-252AA Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0104 ounces, 0.297grams

TO-252AA **Unit: inch(mm)**



Pin Assignment: 1. Base
2,4. Collector
3. Emitter



Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Collector-Base Voltage	V_{CBO}	250	V
Collector-Emitter Voltage	V_{CEO}	200	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	3	A
Collector Current (Pulse)	I_{CP}	6	A
Total Power Dissipation	P_{TOTAL}	1.56	W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55~150	°C

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Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
OFF Characteristics						
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C= 1.0mA, I_B= 0A	200	-	-	V
Collector-Base Breakdown Voltage	BV_{CBO}	I_C= 100uA, I_E= 0A	250	-	-	V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E= 100uA, I_C= 0A	6	-	-	V
Collector-Base Cutoff Current	I_{CBO}	V_{CB}= 200V, I_E= 0A	-	-	50	nA
Emitter-Base Cutoff Current	I_{EBO}	V_{EB}= 6V	-	-	50	nA
Collector-Emitter Cutoff Current	I_{CES}	V_{CES}= 200V	-	-	50	nA
ON characteristics						
DC Current Gain	h_{FE}	V_{CE}= 5V, I_C= 20mA	40	-	-	-
		V_{CE}= 5V , I_C= 500mA	40	80	160	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C= 1A, I_B= 100mA	-	0.2	1	V
Base-Emitter Saturation voltage	$V_{BE(SAT)}$	I_C= 1A, I_B= 100mA	-	-	1.1	V
Collector-Base Capacitance	C_{CBO}	V_{CB}= 10V, f=1MHz	-	-	30	pF
Transition Frequency	f_T	V_{CB}= 0.5V, f=1MHz	50	-	-	MHz
Turn-ON Time	Ton	VCC= 20V, RL= 40ohm	-	100	-	nS
Turn-OFF Time	Toff	IC= 500mA, IB= 50mA	-	1500	-	nS

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TYPICAL CHARACTERISTIC CURVES

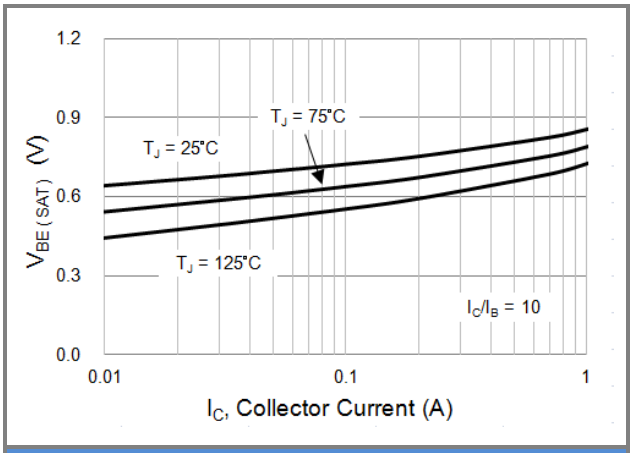

Fig.1 Typical Base-Emitter Saturation Voltage

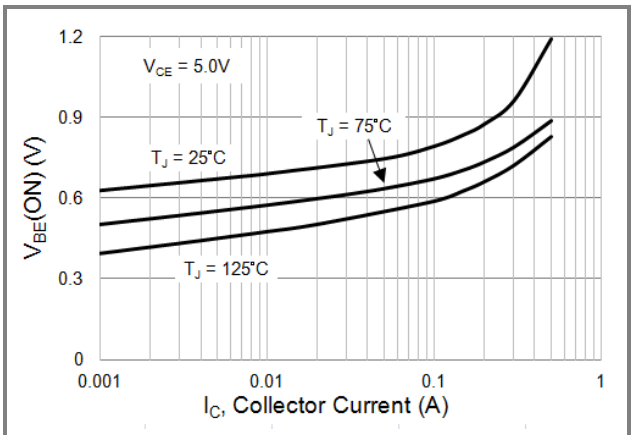

Fig.2 Typical Base-Emitter Turn-on Voltage

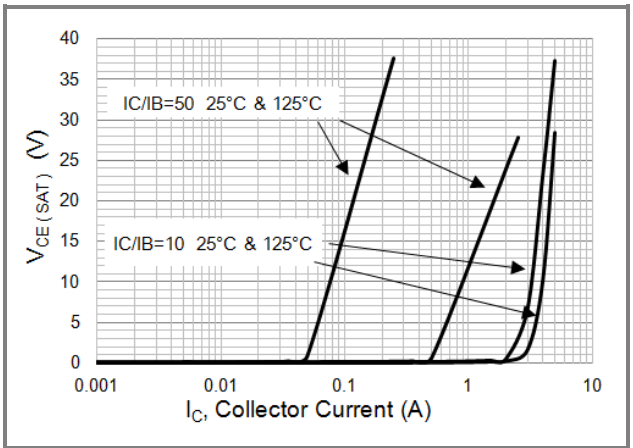

Fig.3 Typical Collector-Emitter Saturation Voltage

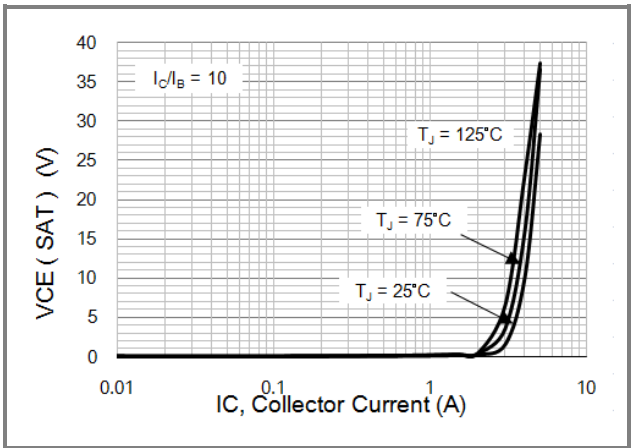

Fig.4 Typical Collector-Emitter Saturation Voltage

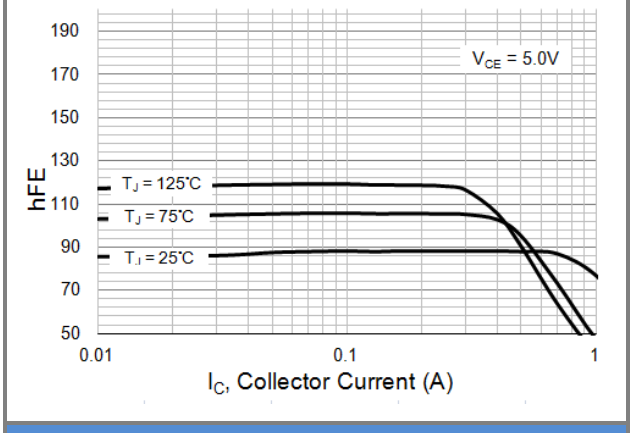

Fig.5 Typical DC Current Gain vs Collector Current

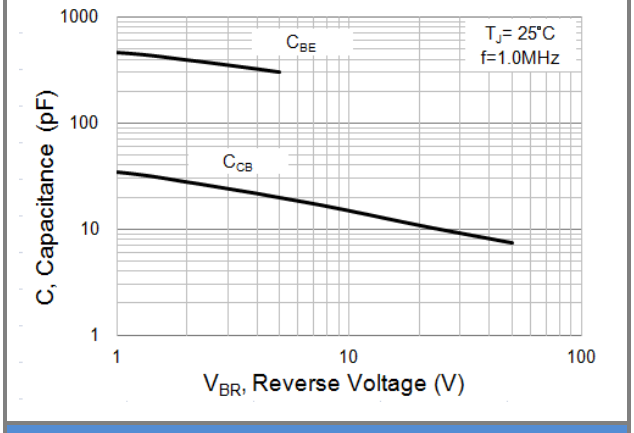

Fig.6 Typical Capacitance

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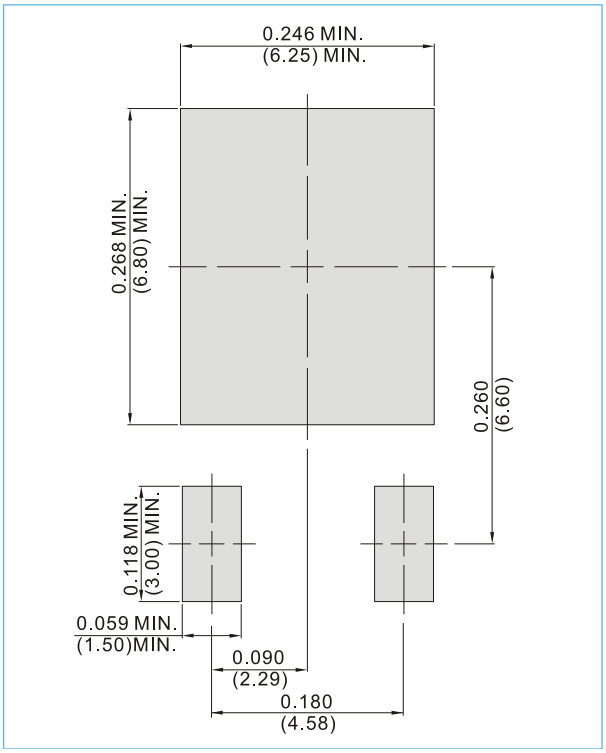
PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
2SC949D_L2_00001	TO-252AA	3000pcs / 13” reel	C949D	Halogen free

MOUNTING PAD LAYOUT

TO-252AA Unit : inch(mm)



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