

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD798

DESCRIPTION

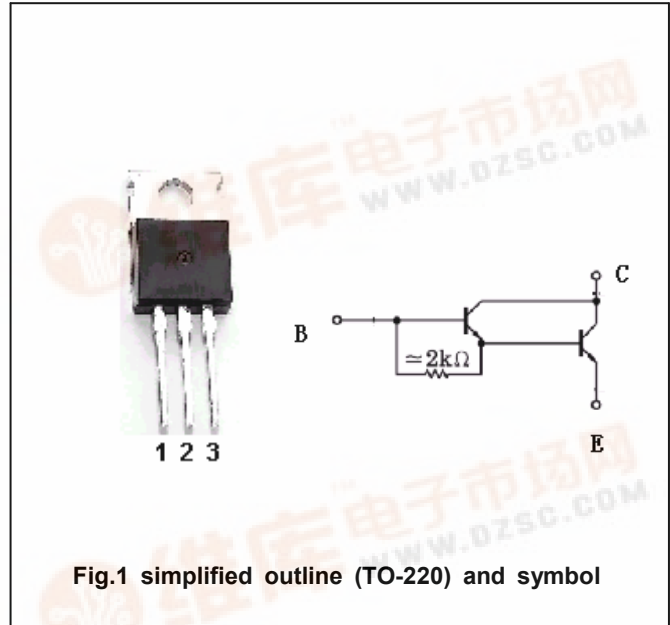
- With TO-220 package
- High voltage
- DARLINGTON

APPLICATIONS

- With switching and igniter applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter



Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	600	V
V_{CEO}	Collector-emitter voltage	Open base	300	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		6	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	30	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors

2SD798

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.5A$; $L=40mH$	300			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4A$; $I_B=0.04A$			2.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=4A$; $I_B=0.04A$			2.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=600V$; $I_E=0$			0.5	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$			0.5	mA
h_{FE-1}	DC current gain	$I_C=2A$; $V_{CE}=2V$	1500			
h_{FE-2}	DC current gain	$I_C=4A$; $V_{CE}=2V$	200			
C_{OB}	Collector output capacitance	$f=1MHz$; $V_{CB}=50V$		35		pF

Switching times

t_{on}	Turn-on time	$I_{B1}=-I_{B2}=0.04A$ $V_{CC}\approx 100V, R_L=25\Omega$		1		μs
t_{stg}	Storage time			8		μs
t_f	Fall time			5		μs

2SD798

Technical drawing of a mechanical part showing front, side, and bottom views with dimensions.

Front View Dimensions:

- Overall width: 10.00
- Top flange width: 8.76
- Top flange thickness: 2.80
- Top flange hole diameter: $\phi 3.50$
- Top flange hole offset from left edge: 0.00
- Top flange hole offset from right edge: 0.45
- Top flange hole offset from center: 1.35
- Top flange hole diameter: $\phi 1.50 \pm 0.01$
- Top flange hole offset from left edge: 8.30
- Top flange hole offset from right edge: 13.00
- Top flange hole offset from center: 15.80
- Top flange hole diameter: 30.00
- Top flange hole offset from left edge: 1.20
- Top flange hole offset from right edge: 0.80
- Top flange hole offset from center: 15.00°
- Top flange hole offset from left edge: 5.08
- Top flange hole offset from right edge: 26.30
- Top flange hole offset from center: 4.30

Side View Dimensions:

- Overall height: 1.300 ± 0.01
- Top flange thickness: 6.55
- Top flange hole offset from left edge: 5.00
- Top flange hole offset from right edge: 5.00
- Top flange hole offset from center: 9.25
- Top flange hole offset from left edge: 5.00
- Top flange hole offset from right edge: 5.00
- Top flange hole offset from center: 0.45 ± 0.01
- Top flange hole offset from left edge: 2.60
- Top flange hole offset from right edge: 2.60
- Top flange hole offset from center: 2.60

Bottom View Dimensions:

- Overall width: 10.00
- Top flange width: 8.76
- Top flange thickness: 2.80
- Top flange hole diameter: $\phi 3.50$
- Top flange hole offset from left edge: 0.00
- Top flange hole offset from right edge: 0.45
- Top flange hole offset from center: 1.35
- Top flange hole diameter: $\phi 1.50 \pm 0.01$
- Top flange hole offset from left edge: 8.30
- Top flange hole offset from right edge: 13.00
- Top flange hole offset from center: 15.80
- Top flange hole diameter: 30.00
- Top flange hole offset from left edge: 1.20
- Top flange hole offset from right edge: 0.80
- Top flange hole offset from center: 15.00°
- Top flange hole offset from left edge: 5.08
- Top flange hole offset from right edge: 26.30
- Top flange hole offset from center: 4.30

Fig.2 Outline dimensions