

Silicon NPN Power Transistors

2SD797

DESCRIPTION

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- With TO-3 package
- High current capability
- High power dissipation

APPLICATIONS

- High power amplifier applications
- High power switching applications
- DC-DC converter applications
- Regulator applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		30	A
I_B	Base current		8	A
P_C	Collector power dissipation	$T_C = 25\square$	200	W
T_j	Junction temperature		175	$\square$
T_{stg}	Storage temperature		-65~175	$\square$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50mA$; $I_B=0$	80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=15A$; $I_B=3A$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=15A$; $I_B=3A$			2.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=100V$; $I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V$; $I_C=0$			0.1	mA
h_{FE-1}	DC current gain	$I_C=1A$; $V_{CE}=5V$	60		200	
h_{FE-2}	DC current gain	$I_C=15A$; $V_{CE}=5V$	10			
C_{OB}	Output capacitance	$I_E=0$; $V_{CB}=10V$; $f=1.0MHz$		400		pF
f_T	Transition frequency	$I_C=1A$; $V_{CE}=5V$		1.5		MHz

Switching times

t_{on}	Turn-on time	$R_L=10\Omega$; $I_{B1}=-I_{B2}=0.5A$; $V_{CC}=50V$		2.5		μs
t_{stg}	Storage time			6.0		μs
t_f	Fall time			1.5		μs

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