

Silicon NPN Power Transistors

2SC3212 2SC3212A

DESCRIPTION

- With TO-3PFa package
- Low collector saturation voltage
- High V_{CBO}
- High speed switching

APPLICATIONS

- For high speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

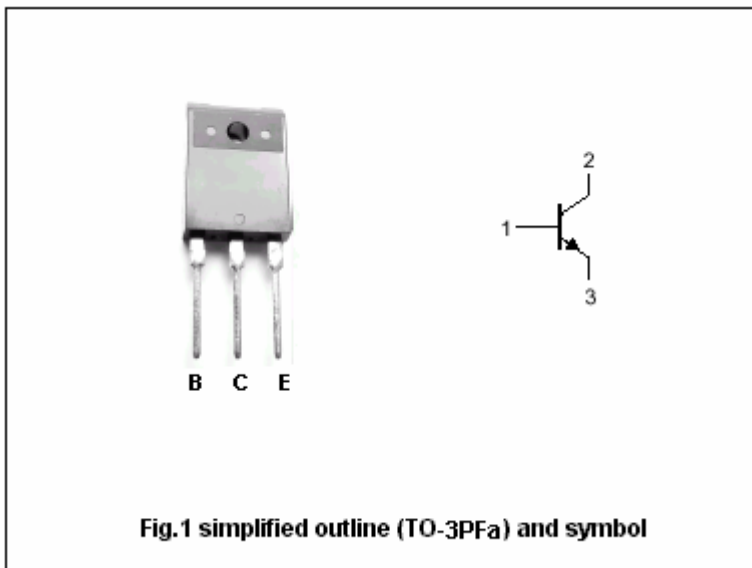


Fig.1 simplified outline (TO-3PFa) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SC3212	800	V
		2SC3212A	900	
V_{CEO}	Collector-emitter voltage	Open base	500	V
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		4	A
P_C	Collector power dissipation	$T_c=25^\circ\text{C}$	100	W
		$T_a=25^\circ\text{C}$	3	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A; L=25mH	500			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A ; I _B =1A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A ; I _B =1A			1.5	V
I _{CBO}	Collector cut-off current	2SC3212			100	μA
		2SC3212A				
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =0.1A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =5V	8			
f _T	Transition frequency	I _C =0.5A ; V _{CE} =10V; f=1MHz		3.5		MHz

Switching times

t _{on}	Turn-on time	2SC3212				1.0	μs
		2SC3212A				1.2	
t _{stg}	Storage time		I _C =5A; V _{CC} =200V I _{B1} =-I _{B2} =1A			2.5	μs
t _f	Fall time	2SC3212				1.0	μs
		2SC3212A				1.2	

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)