

## Silicon NPN Power Transistors

## 2SC3212 2SC3212A

## DESCRIPTION

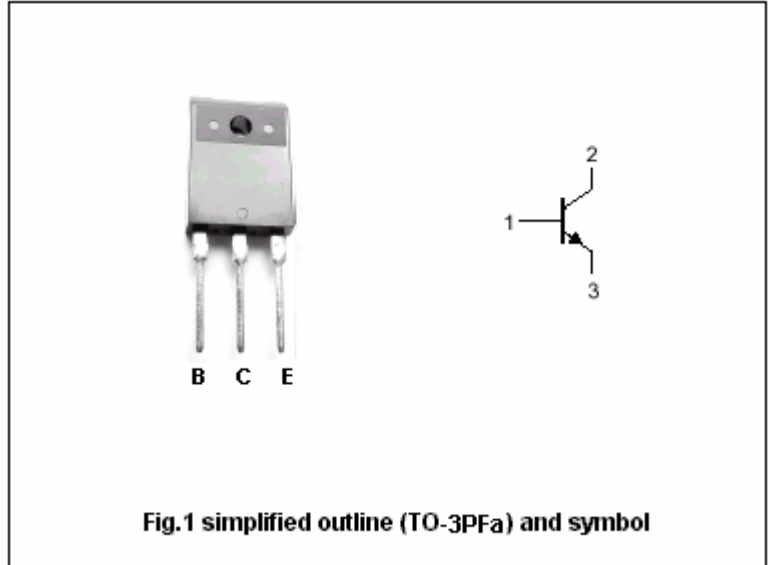
- With TO-3PFa package
- Low collector saturation voltage
- High  $V_{CBO}$
- High speed switching

## APPLICATIONS

- For high speed switching applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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	$T_C=25$	100	W
		$T_a=25$	3	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage		I <sub>C</sub> =0.2A; L=25mH	500			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =5A ; I <sub>B</sub> =1A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =5A ; I <sub>B</sub> =1A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	2SC3212	V <sub>CB</sub> =800V; I <sub>E</sub> =0			100	μ A
		2SC3212A	V <sub>CB</sub> =900V; I <sub>E</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			100	μ A
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V	15			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =5A ; V <sub>CE</sub> =5V	8			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V; f=1MHz		3.5		MHz

## Switching times

t <sub>on</sub>	Turn-on time	2SC3212	I <sub>C</sub> =5A; V <sub>CC</sub> =200V I <sub>B1</sub> =-I <sub>B2</sub> =1A			1.0	μ s		
		2SC3212A				1.2			
t <sub>stg</sub>	Storage time							2.5	μ s
t <sub>f</sub>	Fall time	2SC3212						1.0	μ s
		2SC3212A						1.2	

