

# 2SC3212, 2SC3212A

## Silicon NPN Triple-Diffused Junction Mesa Type

High Breakdown Voltage, High Speed Switching

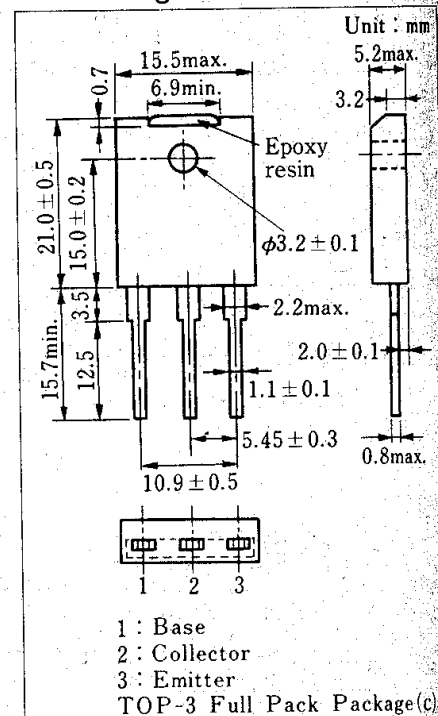
### ■ Features

- High speed switching
- High collector-base voltage ( $V_{CBO}$ )
- Low collector-emitter saturation voltage ( $V_{CE(sat)}$ )
- "Full Pack" package for simplified mounting on a heat sink with one screw

### ■ Absolute Maximum Ratings ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Collector-base voltage	2SC3212	800	V
	2SC3212A	900	
Collector-emitter voltage	$V_{CEO}$	500	V
Emitter-base voltage	$V_{EBO}$	8	V
Peak collector current	$I_{CP}$	15	A
Collector current	$I_C$	7	A
Base current	$I_B$	4	A
Collector power dissipation	$T_c=25^\circ\text{C}$	100	W
	$T_a=25^\circ\text{C}$	3	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

### ■ Package Dimensions



### ■ Electrical Characteristics ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	2SC3212	$V_{CB}=800\text{ V}, I_E=0$			100	$\mu\text{A}$
	2SC3212A	$V_{CB}=900\text{ V}, I_E=0$			100	
Emitter cutoff current	$I_{EBO}$	$V_{EB}=5\text{ V}, I_C=0$			100	$\mu\text{A}$
Collector-emitter voltage	$V_{CEO(sus)}$	$I_C=0.2\text{ A}, L=25\text{ mH}$	500			V
DC current gain	$h_{FE1}$	$V_{CE}=5\text{ V}, I_C=0.1\text{ A}$	15			
	$h_{FE2}$	$V_{CE}=5\text{ V}, I_C=5\text{ A}$	8			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=5\text{ A}, I_B=1\text{ A}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=5\text{ A}, I_B=1\text{ A}$			1.5	V
Transition frequency	$f_T$	$V_{CE}=10\text{ V}, I_C=0.5\text{ A}, f=1\text{ MHz}$		3.5		MHz
Turn-on time	2SC3212	$I_C=5\text{ A}$			1	$\mu\text{s}$
	2SC3212A				1.2	
Storage time	$t_{stg}$	$I_{B1}=1\text{ A}, I_{B2}=-1\text{ A}$			2.5	$\mu\text{s}$
Collector current fall time	2SC3212	$V_{CC}=200\text{ V}$			1	$\mu\text{s}$
	2SC3212A				1.2	