

# 2SC3210

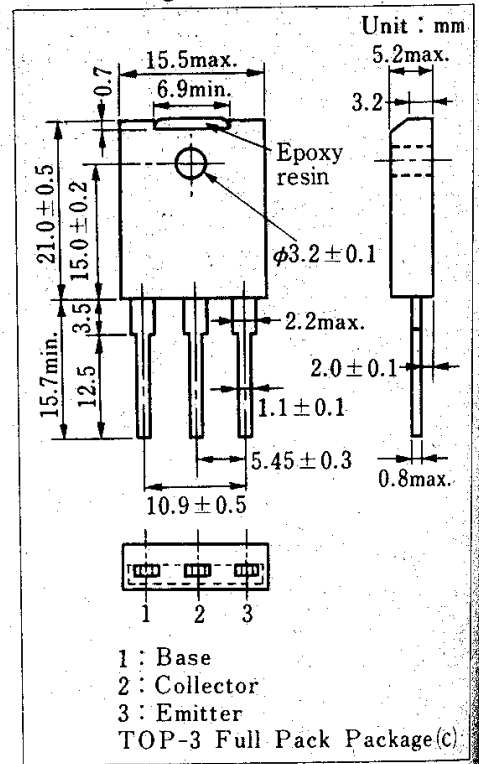
## Silicon NPN Triple-Diffused Junction Mesa Type

High Breakdown Voltage, High Speed Switching

### ■ Features

- High speed switching
- High collector-base voltage ( $V_{CB0}$ )
- Low collector-emitter saturation voltage ( $V_{CE(sat)}$ )
- "Full Pack" package for simplified mounting on a heat sink with one screw

### ■ Package Dimensions



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

Item	Symbol	Value	Unit
Collector-base voltage	$V_{CB0}$	500	V
Collector-emitter voltage	$V_{CEO}$	400	V
Emitter-base voltage	$V_{EBO}$	7	V
Peak collector current	$I_{CP}$	20	A
Collector current	$I_C$	10	A
Base current	$I_B$	5	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	$^\circ\text{C}$

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

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	$I_{CB0}$	$V_{CB}=500\text{ V}, I_E=0$			100	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=5\text{ V}, I_C=0$			100	$\mu\text{A}$
Collector-emitter voltage	$V_{CEO(sus)}$	$I_C=0.2\text{ A}, L=25\text{ mH}$	400			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	$f_T$	$V_{CE}=10\text{ V}, I_C=0.5\text{ A}, f=1\text{ MHz}$		11		MHz
Turn-on time	$t_{on}$	$I_C=5\text{ A}, I_{B1}=1\text{ A}, I_{B2}=-1\text{ A}$ $V_{CC}=150\text{ V}$			1	$\mu\text{s}$
Storage time	$t_{stg}$				2.5	$\mu\text{s}$
Collector current fall time	$t_f$				1	$\mu\text{s}$