

# 2SD1271A

Silicon NPN Transistors



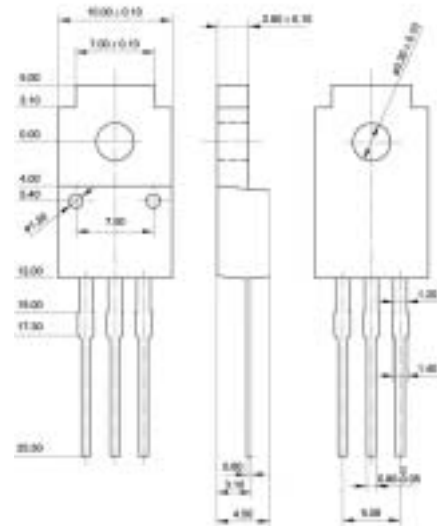
B C E

## ◆ Features

- . For Power Switching.
- . With TO-220Fa package
- . Complement to type 2SB946

## ◆ Absolute Maximum Ratings $T_c=25^\circ\text{C}$

SYMBOL	PARAMETER	RATING	UNIT
$V_{CB0}$	Collector to base voltage	150	V
$V_{CEO}$	Collector to emitter voltage	100	V
$V_{EBO}$	Emitter to base voltage	7	V
$I_{CP}$	Peak collector current	15	A
$I_C$	Collector current	7	A
$P_C$	Collector power dissipation	40	W
$T_j$	Junction temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55~150	$^\circ\text{C}$



TO-220Fa

## ◆ Electrical Characteristics $T_c=25^\circ\text{C}$

SYMBOL	PARAMETER	CONDITIONS	MIN	Typ.	MAX	UNIT
$I_{CB0}$	Collector cut-off current	$V_{CB}=100\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{E0}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			50	$\mu\text{A}$
$V_{CB0}$	Collector-base breakdown voltage					
$V_{CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}; I_B=0$	100			V
$V_{EBO}$	Emitter-base breakdown voltage					
$V_{CE(sat-1)}$	Collector-emitter saturation voltages	$I_C=5\text{A}; I_B=0.25\text{A}$			0.5	V
$V_{CE(sat-2)}$	Collector-emitter saturation voltages					
$h_{FE-1}$	Forward current transfer ratio	$I_C=0.1\text{A}; V_{CE}=2\text{V}$	45			
$h_{FE-2}$	Forward current transfer ratio	$I_C=3\text{A}; V_{CE}=2\text{V}$	60		260	
$V_{BE(sat)1}$	Base-emitter saturation voltages	$I_C=5\text{A}; I_B=0.25\text{A}$			1.5	V
$V_{BE(sat)2}$	Base-emitter saturation voltages					
$f_T$	Transition frequency	$I_C=0.5\text{A}; V_{CE}=10\text{V}, f=10\text{MHz}$		30		MHz

## ◆ $h_{FE-2}$ Classification

R	Q	P
60-120	90-180	130-260