

2N5298

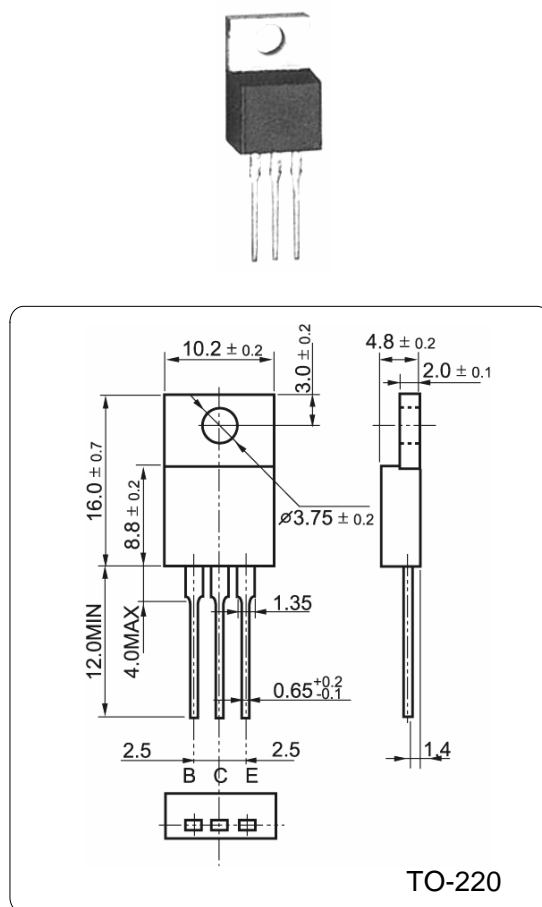
Silicon NPN Transistors

◆ Features

- With TO-220 package
- Designed for use in general purpose amplifier and switching applications

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

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to base voltage	80	V
V_{CEO}	Collector to emitter voltage	60	V
V_{EBO}	Emitter to base voltage	5.0	V
I_{CP}	Peak collector current	5.0	A
I_{C}	Collector current	4.0	A
P_{C}	Collector power dissipation	36	W
T_{j}	Junction temperature	-65~150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-65~150	$^{\circ}\text{C}$



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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{CBO}	Collector-base cut-off current	$V_{\text{CB}} = 80\text{V}; I_{\text{E}}=0$		0.2	mA
I_{EBO}	Emitter-base cut-off current	$V_{\text{EB}} = 5\text{V}; I_{\text{C}}=0$		1.0	mA
I_{CEO}	Collector-emitter cut-off current	$V_{\text{CE}}=60\text{V}, I_{\text{B}}=0$		0.3	mA
V_{CBO}	Collector-base breakdown voltage				
$V_{(\text{BR})\text{CEO}}$	Collector-emitter breakdown voltage	$I_{\text{C}}=30\text{mA}, I_{\text{B}}=0$	60		V
V_{EBO}	Emitter-base breakdown voltage				
$V_{\text{CEsat-1}}$	Collector-emitter saturation voltages	$I_{\text{C}} = 3\text{A}; I_{\text{B}} = 375\text{mA}$		1.2	V
$V_{\text{CEsat-2}}$	Collector-emitter saturation voltages				
$V_{\text{CEsat-3}}$	Collector-emitter saturation voltages				
$V_{\text{CEsat-4}}$	Collector-emitter saturation voltages				
$h_{\text{FE-1}}$	Forward current transfer ratio	$I_{\text{C}}=1\text{A}, V_{\text{CE}}=4\text{V}$	25		
$h_{\text{FE-2}}$	Forward current transfer ratio	$I_{\text{C}}=3\text{A}, V_{\text{CE}}=4\text{V}$	10	50	
$h_{\text{FE-3}}$	Forward current transfer ratio				
$h_{\text{FE-4}}$	Forward current transfer ratio				
$V_{\text{BE(sat)1}}$	Base-emitter saturation voltages	$I_{\text{C}}=3\text{A}, V_{\text{CE}}=4\text{V}$		1.8	V
$V_{\text{BE(sat)2}}$	Base-emitter saturation voltages				
$V_{\text{BE(sat)3}}$	Base-emitter saturation voltages				
f_{T}	Transition frequency at $f = 1\text{MHz}$	$I_{\text{C}}=0.5\text{A}, V_{\text{CE}}=10\text{V}$	3.0		
t_{f}	Fall time				
t_{s}	Turn-off storage time				