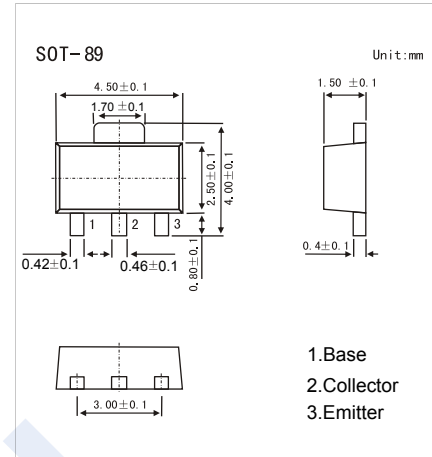


## NPN Transistors

### 2SC4375-HF

#### ■ Features

- Collector Current Capability  $I_c=1.5\text{ A}$
- Collector Emitter Voltage  $V_{CE0}=30\text{ V}$
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	30	V
Collector - Emitter Voltage	$V_{CE0}$	30	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_c$	1.5	A
Collector Power Dissipation	$P_c$	500	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	250	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_c = 1\text{ mA}, I_E = 0$	30			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_c = 10\text{ mA}, I_B = 0$	30			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 1\text{ mA}, I_c = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 30\text{ V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 5\text{ V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 1.5\text{ A}, I_B = 30\text{ mA}$			2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 1.5\text{ A}, I_B = 30\text{ mA}$			1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = 2\text{ V}, I_c = 500\text{ mA}$			1	
DC current gain	$h_{FE}$	$V_{CE} = 2\text{ V}, I_c = 500\text{ mA}$	100		320	
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$			40	pF
Transition frequency	$f_T$	$V_{CE} = 2\text{ V}, I_c = 0.5\text{ A}$		120		MHz

#### ■ Classification of $h_{FE}$

Type	2SC4375-O-HF	2SC4375-Y-HF
Range	100-200	160-320
Marking	GO <sub>F</sub>	GY <sub>F</sub>