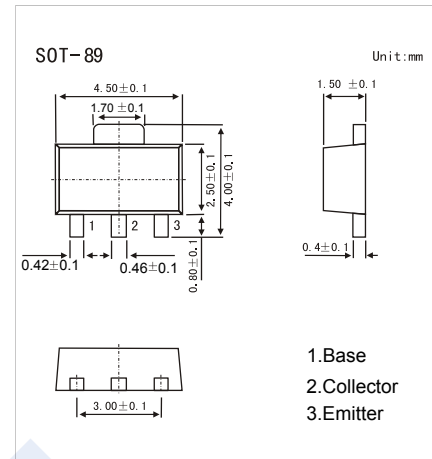


NPN Transistors

2SD2359-HF

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Complementary to 2SB1539-HF
- 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}	20	V
Collector - Emitter Voltage	V_{CE0}	20	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	1.2	
Collector Power Dissipation	P_C	1	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}	$I_C = 100\mu\text{A}$, $I_E = 0$	20			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1\text{mA}$, $I_B = 0$	20			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 16\text{V}$, $I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 10\text{mA}$		0.11	0.2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 10\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 100\text{mA}$	200		800	
Collector output capacitance	C_{ob}	$V_{CB} = 6\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		23		pF
Transition frequency	f_T	$V_{CE} = 6\text{V}$, $I_E = -50\text{mA}$, $f = 200\text{MHz}$		100		MHz

■ Marking

Marking	10 F
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NPN Transistors

2SD2359-HF

Typical Characteristics

