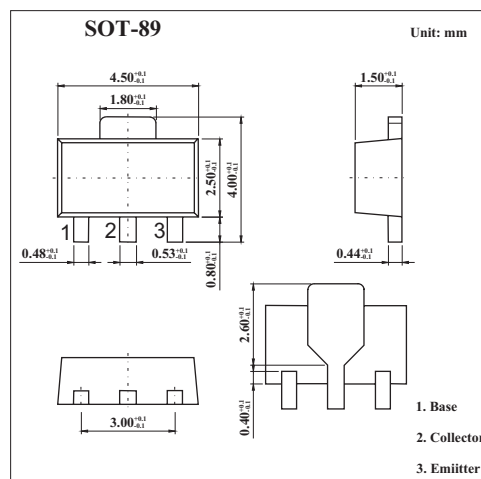


High Gain Amplifier Transistor

2SD2153

■ Features

- Low saturation voltage.
- Excellent DC current gain characteristics.

■ 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}	25	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	2	A
Collector power dissipation	P_C	0.5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CB0}	$I_C=50\mu\text{A}$	30			V
Collector-emitter breakdown voltage	BV_{CE0}	$I_C=1\text{mA}$	25			V
Emitter-base breakdown voltage	BV_{EB0}	$I_E=50\mu\text{A}$	6			V
Collector cutoff current	I_{CBO}	$V_{CB}=20\text{V}$			0.5	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=5\text{V}$			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=20\text{mA}$		0.12	0.5	V
DC current transfer ratio	h_{FE}	$V_{CE}=6\text{V}, I_C=0.5\text{A}$	560		2700	
Output capacitance	f_t	$V_{CE}=10\text{V}, I_E=-10\text{mA}, f=100\text{MHz}$		110		MHz
Transition frequency	C_{ob}	$V_{CB}=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$		22		pF

■ h_{FE} Classification

Marking	DN		
Rank	U	V	W
h_{FE}	560~1200	820~1800	1200~2700