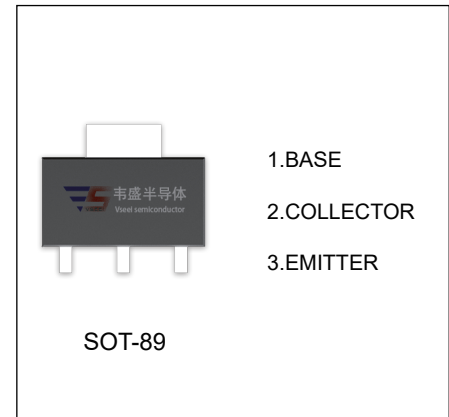


2SD2153 TRANSISTOR (NPN)

FEATURES

- Low saturation voltage
- Excellent DC current gain characteristics



MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector -Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Continuous Collector Current	2	A
I_{CP}	Pulsed Collector Current	3	A
P_C	Collector Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

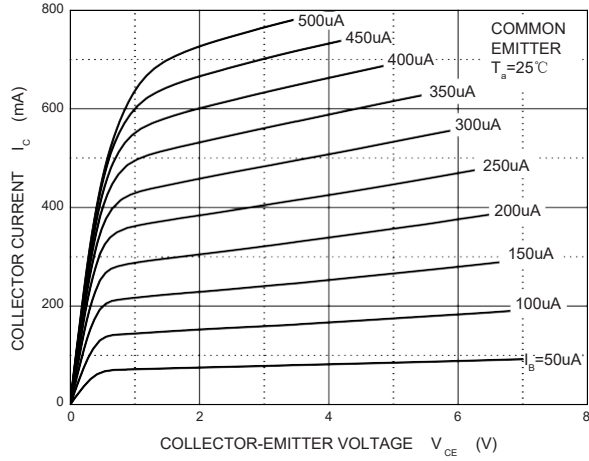
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu\text{A}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.5	μA
DC current gain	h_{FE}	$V_{CE}=6\text{V}, I_C=500\text{mA}$	560		2700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=20\text{mA}$			0.5	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$		110		MHz
Collector capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		22		pF

*Single pulse, $P_W=10\text{ms}$

CLASSIFICATION OF h_{FE}

Rank	U	V	W
Range	560~1200	820~1800	1200~2700

Static Characteristic

 h_{FE} — I_c
