2SC5785 TRANSISTOR（NPN）

1.BASE
2.COLLECTOR
3.EMITTER

SOT-89

FEATURES

- High-Speed Switching Applications
- DC-DC Converter Applications
- Strobe Applications

Marking: 3E

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	2	A
I_{CP}	Collector Current –Pulse	3.5	A
I_B	Base Current	0.2	A
P_C	Collector Power Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	250	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA , I_E=0	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA , I_B=0	10			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=20V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=7V, I_C=0			0.1	μA
DC current gain	h_{FE1}	V_{CE}=2V, I_C=0.2A	400		1000	
	h_{FE2}	V_{CE}=2V, I_C=0.6A	200			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C= 0.6A, I_B=12mA			0.12	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 0.6A, I_B=12mA			1.1	V
Rise time	t_r	See Figure 1 circuit diagram. V_{CC}≈6V, R_L=10Ω, I_{B1}=-I_{B2}=12mA		60		ns
Storage time	t_S			215		ns
Fall time	t_f			25		ns