

2SD1802 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

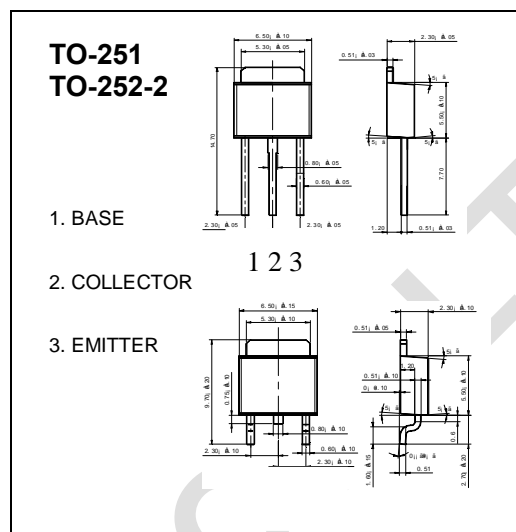
$$I_{CM}: 3 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$

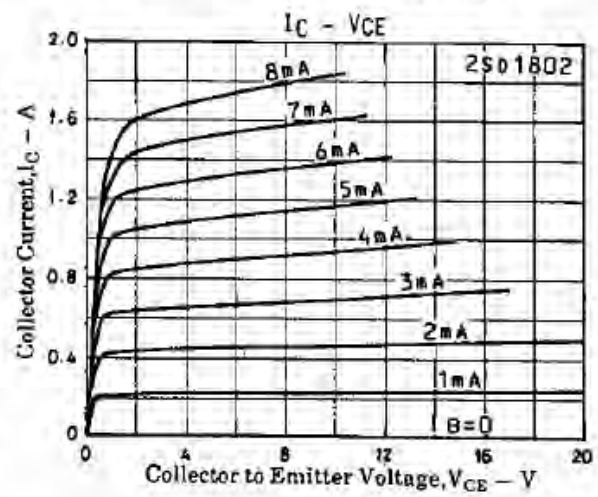
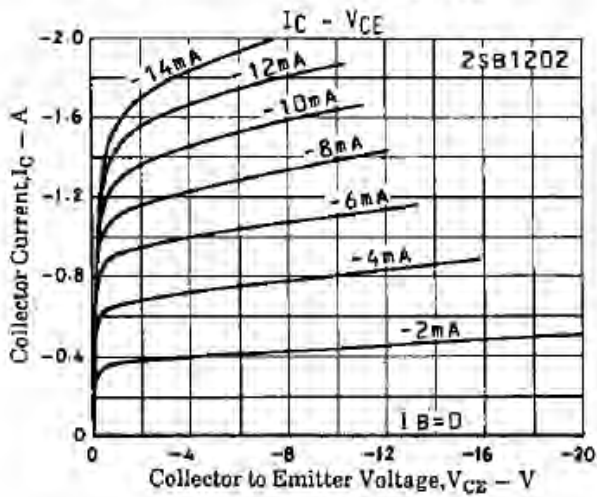
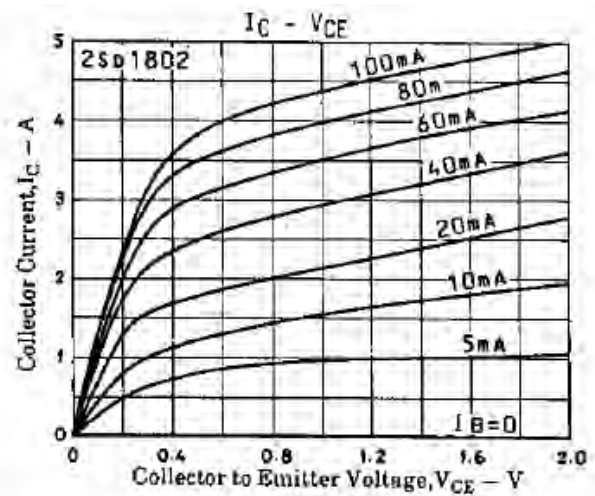
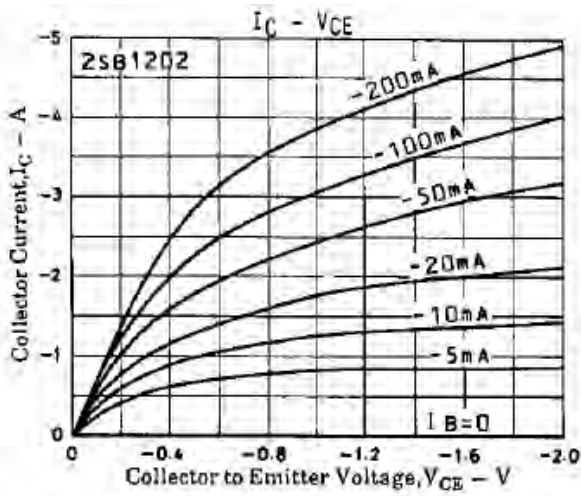


ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{V}, I_C=100\text{mA}$	100		560	
	$h_{FE(2)}$	$V_{CE}=2\text{V}, I_C=3\text{A}$	35			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=100\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=100\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		25		pF
Turn-off time	t_{on}	$V_{CC}=25\text{V}, I_C=1\text{A}$ $I_{B1}=-I_{B2}=0.1\text{A}$		70		nS
Fall time	t_f			650		
Storage time	t_s			35		

CLASSIFICATION OF $h_{FE(1)}$

Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560
Marking				



WEJ ELE