

2SD596 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.2 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

$$I_{CM}: 0.7 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 30 \text{ V}$$

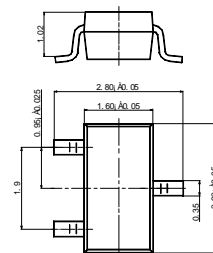
Operating and storage junction temperature range

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

SOT-23-3L



1. BASE
2. EMITTER
3. COLLECTOR



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1 \text{ mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=30 \text{ V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5 \text{ V}, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=1 \text{ V}, I_C=100 \text{ mA}$	110		400	
	$h_{FE(2)}^*$	$V_{CE}=1 \text{ V}, I_C=700 \text{ mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=700 \text{ mA}, I_B=70 \text{ mA}$			0.6	V
Base-emitter voltage	$V_{BE(on)}^*$	$V_{CE}=6 \text{ V}, I_C=10 \text{ mA}$	0.6		0.7	V
Transition frequency	f_T	$V_{CE}=6 \text{ V}, I_C=10 \text{ mA}$	140			MHz

* Pulse test : Pulse width $\leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$.

CLASSIFICATION OF $h_{FE(1)}$

Marking	DV1	DV2	DV3	DV4	DV5
Range	110-180	135-220	170-270	200-320	250-400