

SOT-23 Plastic-Encapsulate Transistors

2SD596 TRANSISTOR (NPN)

FEATURES

Power dissipation

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

Collector current

I_{CM} : 0.7 A

Collector-base voltage

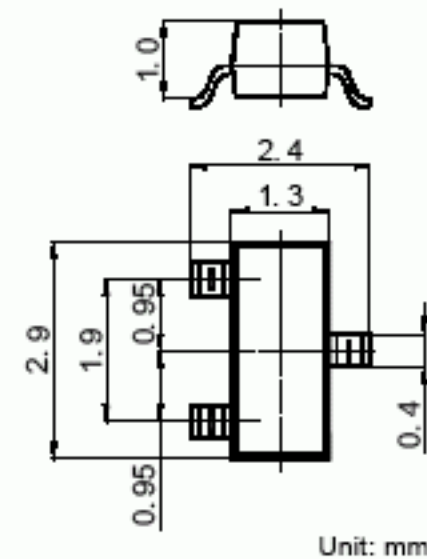
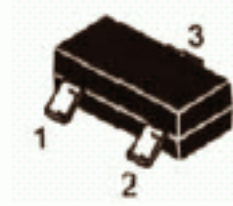
$V_{(BR)CBO}$: 30 V

Operating and storage junction temperature range

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

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{ mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	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 $\leq 350\mu s$, 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