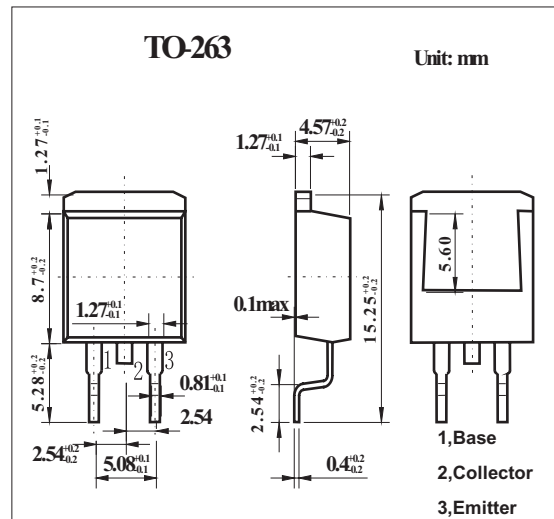


2SC4597

■ Features

- Surface mount type device making the following possible.
- Reduction in the number of manufacturing processes for 2SC4597-applied equipment.
- High density surface mount applications.
Small size of 2SC4597-applied equipment.
- High breakdown voltage, high reliability.
- Fast switching speed.
- Wide ASO.
- Adoption of MBIT process.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	500	V
Collector-emitter voltage	V _{CEO}	400	V
Emitter-base voltage	V _{EBO}	7	V
Collector current (DC)	I _C	4	A
Collector current (Pulse) *	I _{CP}	8	
Base current	I _B	1.5	A
Collector power dissipation Ta = 25°C Tc = 25°C	P _C	1.65	W
		40	
Junction temperature	T _J	150	°C
Storage temperature range	T _{stg}	-55 to +150	°C

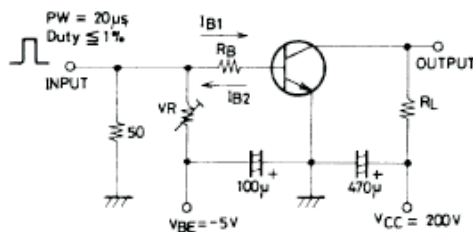
* PW ≤ 300ms, duty cycle ≤ 10%

2SC4597

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cut-off current	ICBO	V _{CB} = 400 V, I _E = 0			10	μA
Emitter cut-off current	IEBO	V _{EB} = 5 V, I _C = 0			10	μA
DC current gain	hFE	V _{CE} = 5 V, I _C = 0.4A	15		50	
		V _{CE} = 5 V, I _C = 2A	10			
		V _{CE} = 5 V, I _C =10mA	10			
Gain-Bandwidth product	fT	V _{CE} = 10 V, I _C =0.4A		20		MHz
Output Capacitance	Cob	V _{CB} =10V,f=1MHz		50		pF
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 2 A, I _B = 0.4 A			0.8	V
Base-emitter saturation voltage	V _{BE (sat)}	I _C = 2 A, I _B = 0.4 A			1.5	V
Collector-base breakdown voltage	V (BR) CBO	I _C = 1 mA, I _E = 0	500			V
Collector-emitter breakdown voltage	V (BR) CEO	I _C = 5 mA, R _{BE} =∞	400			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =1mA,I _C =0	7			
Collector-to-Emitter Sustain Voltage	V _{CES(SUS)}	I _C =2A,I _{B1} =0.2A,L=1mH,I _{B2} =-0.8A	400			
Turn-ON time	ton	I _C =3A,I _{B1} =0.6A,I _{B2} =-1.2A,R _L =66.6 Ω,V _{CC} =200V			0.5	μs
Storage time	tstg				2.5	
Fall time	tr				0.3	

■ Switching Time Test Circuit



Unit (resistance : Ω, capacitance : F)

■ hFE Classification

Rank	L	M	N
hFE	15 to 30	20 to 40	30 to 50