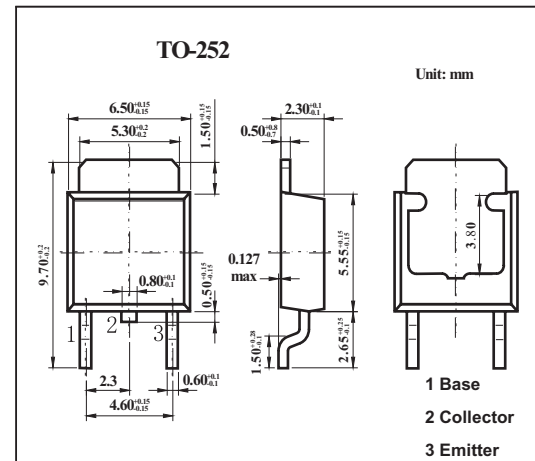


High-voltage Switching Transistor

2SA1875

■ Features

- High f_T : $f_T=400\text{MHz}(\text{typ})$.
- High breakdown voltage : $V_{CE0} \geq 200\text{V}(\text{min})$.
- Large current capacitance.
- Adoption of FBET process.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-to-Base Voltage	V_{CBO}	-200	V
Collector-to-Emitter Voltage	V_{CEO}	-200	V
Emitter-to-Base Voltage	V_{EBO}	-3	V
Collector Current	I_C	-300	mA
Collector Current (Pulse)	I_{CP}	-600	mA
Base Current	I_B	-30	mA
Collector Dissipation $T_c=25^\circ\text{C}$	P_C	0.8	W
		12	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	$^\circ\text{C}$

2SA1875

■ Electrical Characteristics Ta = 25°C unless otherwise stated

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cutoff Current	ICBO	V _{CB} =-150V, I _E =0			-0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =-2V, I _C =0			-1.0	μA
DC Current Gain	hFE	V _{CE} =-10V, I _C =-50mA	60		320	
		V _{CE} =-10V, I _C =-250mA	20			
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _C =-100mA		400		MHz
Output Capacitance	C _{ob}	V _{CB} =-30V, f=1MHz		5.0		pF
Reverse Transfer Capacitance	C _{re}	V _{CB} =-30V, f=1MHz		4.2		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-50mA, I _B =-5mA			-1.0	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-50mA, I _B =-5mA			-1	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-200			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, R _{BE} =∞	-200			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-3			V

■ hFE Classification

Rank	D	E	F
hFE	60 to 120	100 to 200	160 to 320