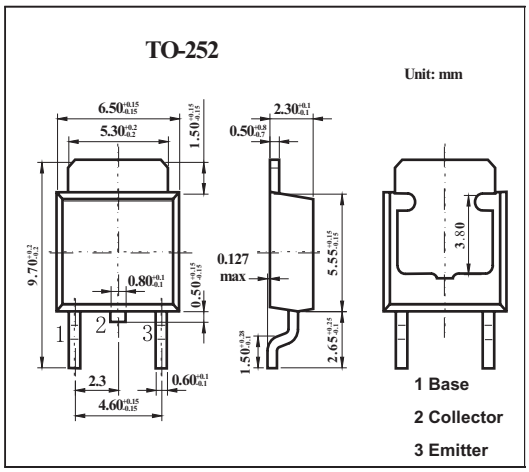
High-voltage Switching Transistor

2SA1875



■ Features

- High f_T : f_T=400MHz(typ).
- High breakdown voltage : V_{CEO}≥200V(min).
- Large current capacitance.
- Adoption of FBET process.

■ Absolute Maximum Ratings Ta = 25℃

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	P_C	0.8	W
T_c=25℃		12	W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to 150	℃

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■ Electrical Characteristics Ta = 25℃ unless otherwise stated

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB}=-150V, I_E=0			-0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-2V, I_C=0			-1.0	μA
DC Current Gain	h_{FE}	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

■ h_{FE} Classification

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