

High-Current Switching Applications

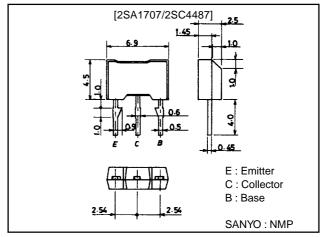
Features

- · Adoption of FBET, MBIT processes.
- · Large current capacity, wide ASO.
- · Low collector-to-emitter saturation voltage.
- · Fast switching speed.

Package Dimensions

unit:mm

2064



(): 2SA1707

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)60	V
Collector-to-Emitter Voltage	V _{CEO}		(-)50	V
Emitter-to-Base Voltage	V _{EBO}		(–)6	V
Collector Current	Ic		(-)3	Α
Collector Current (Pulse)	I _{CP}		(–)6	Α
Collector Dissipation	PC		1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
Falantete		Conditions	min	typ	max	Offic
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(–)1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(–)1	μA
DC Current Gain	h _{FE} 1	V _{CE} =(-)2V, I _C =(-)100mA	100*		400*	
	h _{FE} 2	V _{CE} =(-)2V, I _C =(-)3A	35			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		150		MHz

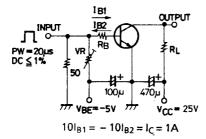
 $[\]ast$: 2SA1707/2SC4487 are classified by 100mA h_{FE} as follows :

	100	R	200	140	S	280	200	Т	400	
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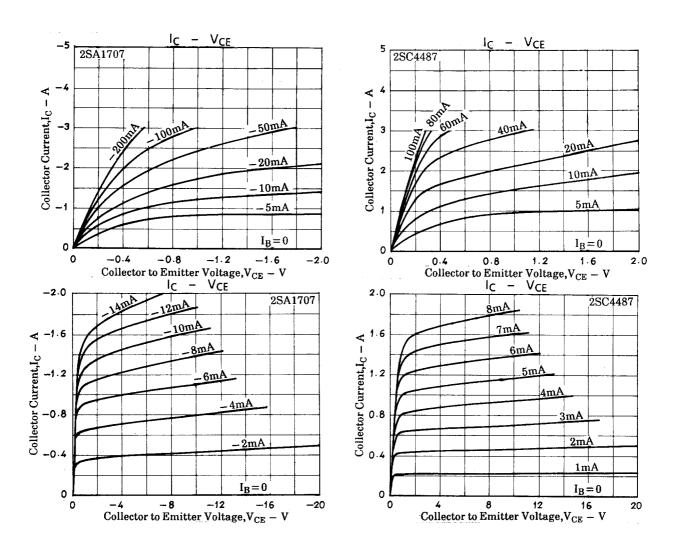
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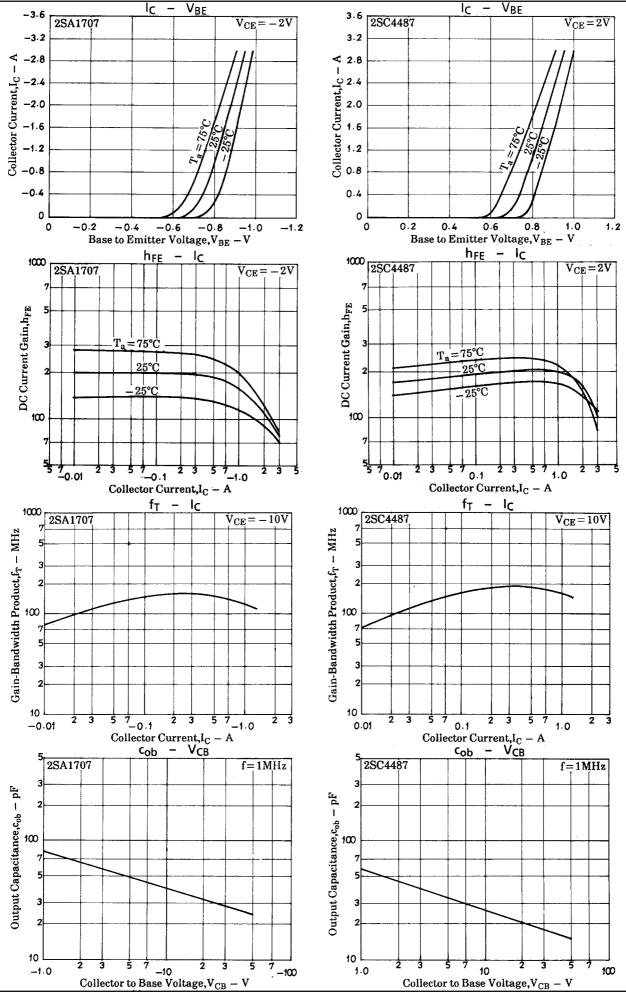
Parameter	Symbol	Conditions		Unit		
Falametei	Symbol	Conditions		typ	max	UIII
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)2A, I _B =(-)100mA		(-0.35)	(-0.7)	V
				0.2	0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)2A, I _B =(-)100mA		(-)0.95	(-)1.2	V
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(39)25		pF
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)10μΑ, I _E =0	(-)60			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(-)1mA, R _{BE} =∞	(–)50			V
Emitter-to-Base Breakdown Votage	V(BR)EBO	I _E =(-)10μA, I _C =0	(–)6			V
Turn-ON TIme	ton	See specified Test Circuit		70		ns
Storage Time	t _{stg}	See specified Test Circuit		(450)		ns
				650		ns
Fall Time	t _f	See specified Test Circuit		35		ns

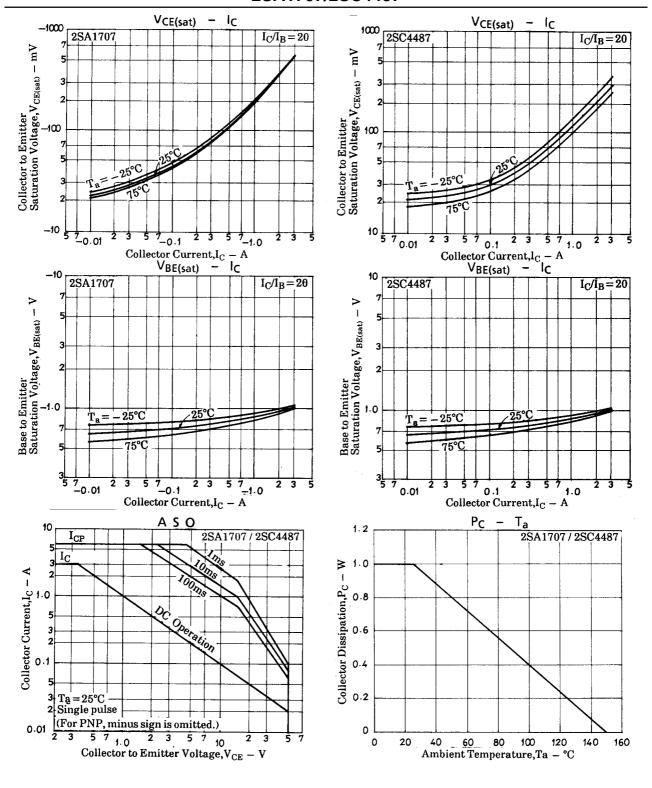
Switching Time Test Circuit



(For PNP, the polarity is reversed.) Unit (resistance : Ω , capacitance : F)







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