

2SC3807

High h_{FE}, Low-Frequency General-Purpose Amplifier Applications

Applications

· Low frequency general-purpose amplifiers, drivers.

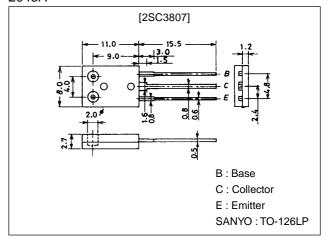
Features

- · Large current capacity (I_C=2A).
- · Adoption of MBIT process.
- · High DC current gain (h_{FE}=800 to 3200).
- · Low collector-to-emitter saturation voltage ($V_{CE(sat)} \le 0.5V$).
- · High V_{EBO} (V_{EBO}≥15V).

Package Dimensions

unit:mm

2043A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		30	V
Collector-to-Emitter Voltage	VCEO		25	V
Emitter-to-Base Voltage	V _{EBO}		15	V
Collector Current	IC		2	Α
Collector Current (Pulse)	I _{CP}		4	Α
Collector Dissipation	PC		1.2	W
		Tc=25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

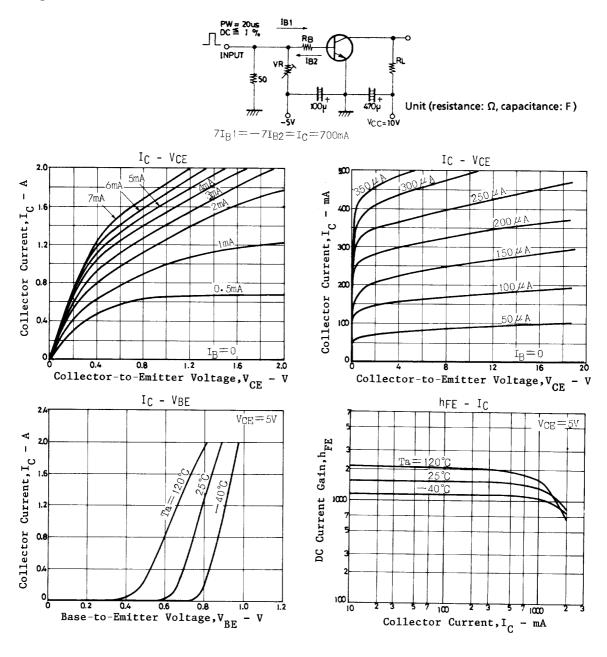
Electrical Characteristics at Ta = 25°C

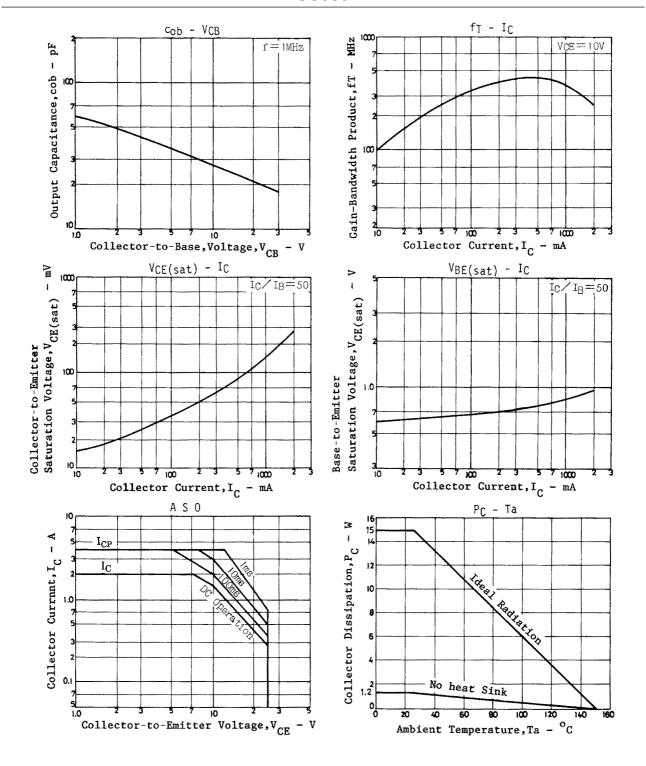
Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	O IIII
Collector Cutoff Current	ICBO	V _{CB} =20V, I _E =0			0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =10V, I _C =0			0.1	μA
DC Current Gain	h _{FE} 1	V _{CE} =5V, I _C =500mA	800	1500	3200	
	h _{FE} 2	V _{CE} =5V, I _C =1A	600			
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =50mA		260		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		27		pF

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	01111
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =1A, I _B =20mA		0.15	0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =1A, I _B =20mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10μA, I _E =0	30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	25			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =10μA, I _C =0	15			V
Turn-ON Time	ton	See specified test circuit.		0.14		μs
Storage Time	t _{stg}	See specified test circuit.		1.35		μs
Fall Time	t _f	See specified test circuit.		0.1		μs

Switching Time Test Circuit





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