

PNP SILICON EPITAXIAL TRANSISTOR

2SA1836

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DESCRIPTION

The 2SA1836 is PNP silicon epitaxial transistor.

FEATURES

- High DC current gain: $h_{FE2} = 200$ TYP.
- High voltage: $V_{CEO} = -50$ V
- Can be automatically mounted

★ ORDERING INFORMATION

PART NUMBER	PACKAGE
2SA1836	SC-75 (USM)

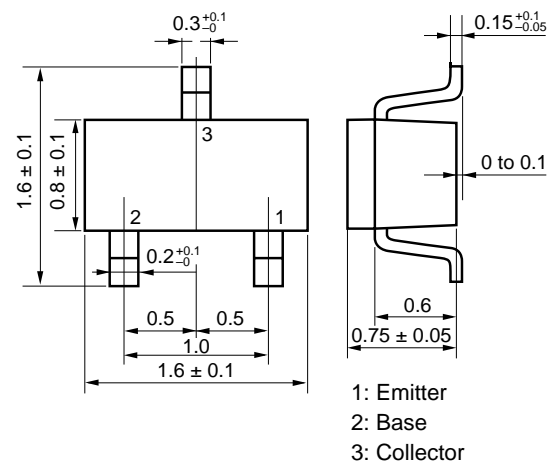
ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Collector to Base Voltage	V _{CBO}	-60	V
Collector to Emitter Voltage	V _{CEO}	-50	V
Emitter to Base Voltage	V _{EBO}	-5.0	V
Collector Current (DC)	I _{C(DC)}	-100	mA
Collector Current (pulse)	I _{C(pulse)}	-200	mA
Total Power Dissipation	P _T	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 to + 150	°C

Notes 1. PW ≤ 10 ms, Duty Cycle ≤ 50%

2. When mounted on ceramic substrate of 3.0 cm² x 0.64 mm

★ PACKAGE DRAWING (Unit: mm)



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ELECTRICAL CHARACTERISTICS (T_A = 25°C)

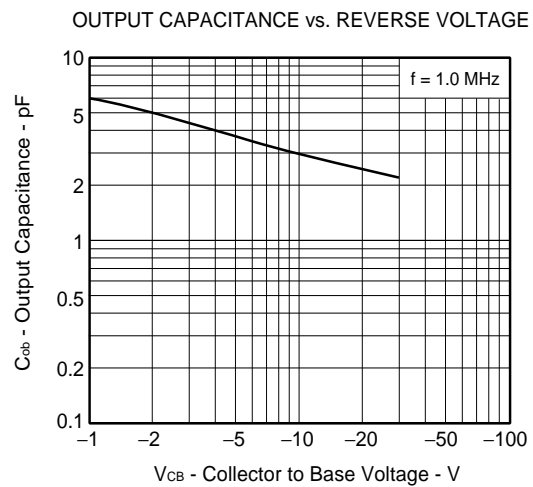
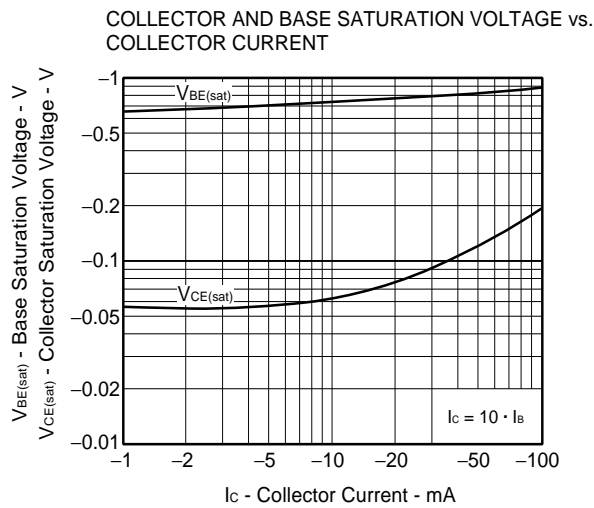
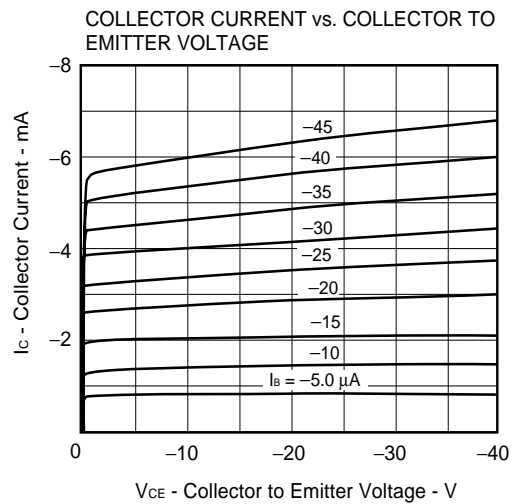
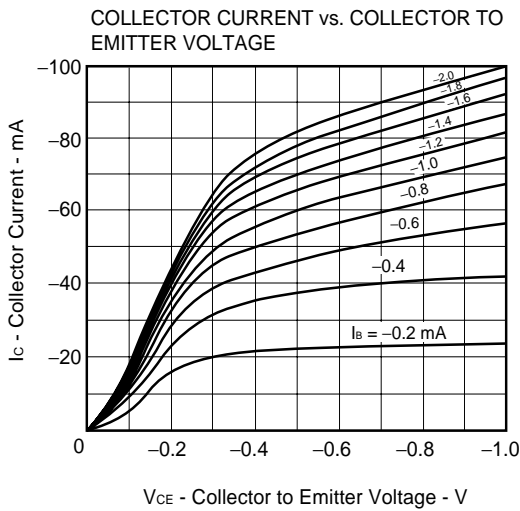
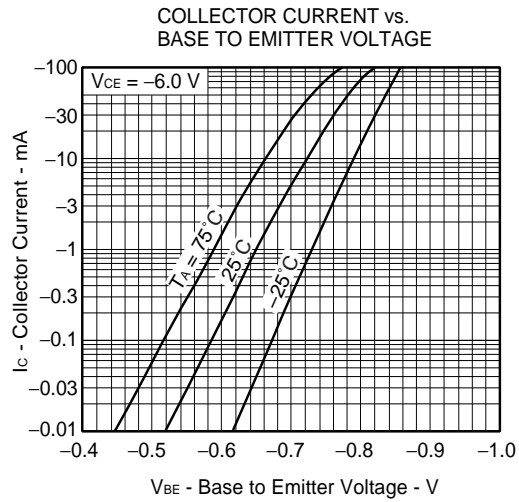
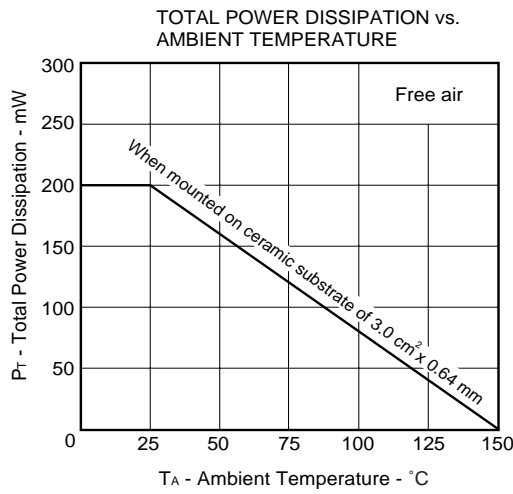
CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = -6.0 V, I _E = 0			-100	nA
Emitter Cut-off Current	I _{EBO}	V _{EB} = -5.0 V, I _C = 0			-100	nA
DC Current Gain ^{Note}	h _{FE1}	V _{CE} = -6.0 V, I _C = -0.1 mA	50			-
	h _{FE2}	V _{CE} = -6.0 V, I _C = -1.0 mA	90	200	600	-
Base to Emitter Voltage ^{Note}	V _{BE}	V _{CE} = -6.0 V, I _C = -1.0 mA		-0.62		V
Collector Saturation Voltage ^{Note}	V _{CE(sat)}	I _C = -100 mA, I _B = -10 mA		-0.18	-0.30	V
Base Saturation Voltage ^{Note}	V _{BE(sat)}	I _C = -100 mA, I _B = -10 mA		-0.86	-1.00	V
Gain Bandwidth Product	f _T	V _{CE} = -6.0 V, I _E = 10 mA	50	180		MHz
Output Capacitance	C _{ob}	V _{CE} = -6.0 V, I _E = 0 mA, f = 1.0 MHz		4.5	6.0	pF

Note Pulsed: PW ≤ 350 μs, Duty Cycle ≤ 2%

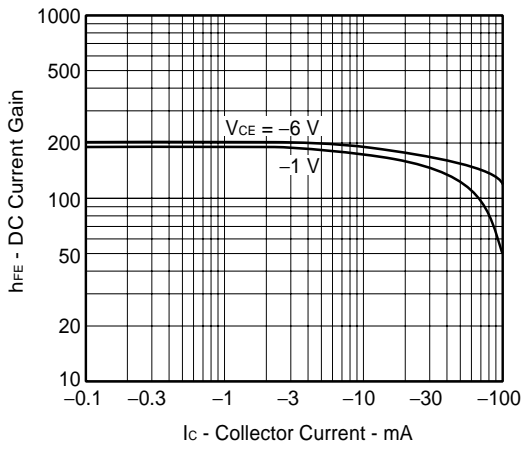
h_{FE} CLASSIFICATION

Marking	M4	M5	M6	M7
h _{FE2}	90 to 180	135 to 270	200 to 400	300 to 600

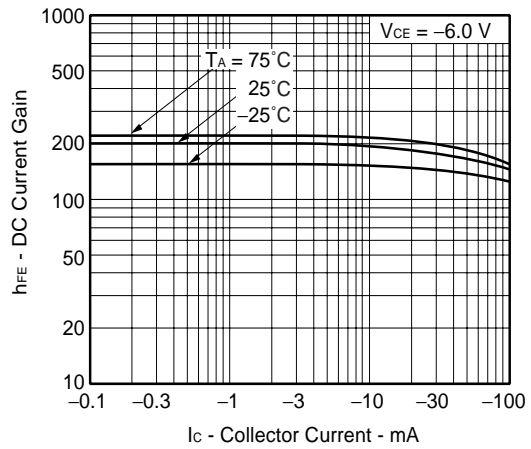
TYPICAL CHARACTERISTICS (T_A = 25°C)



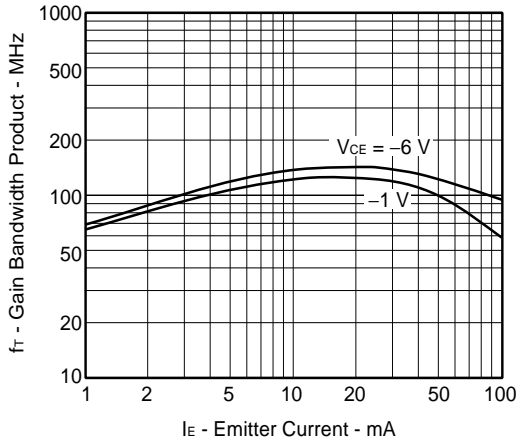
DC CURRENT GAIN vs. COLLECTOR CURRENT



DC CURRENT GAIN vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



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