

SILICON TRANSISTOR 2SC3736

HIGH SPEED SWITCHING NPN SILICON EPITAXIAL TRANSISTOR POWER MINI MOLD

DESCRIPTION

The 2SC3736 is designed for power amplifier and high speed switching applications.

FEATURES

- High speed, high voltage switching
- · Low collector saturation voltage
- Complementary to the 2SA1460 PNP transistor.

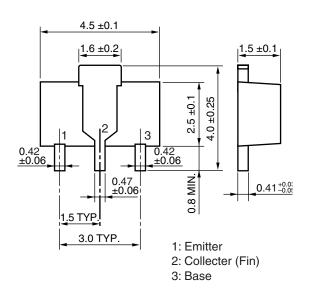
ABSOLUTE MAXIMUM RATINGS (TA = 25°C)

Collector to Base Voltage	Vсво	80	V
Collector to Emitter Voltage	VCEO	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	Ic(DC)	1.0	Α
Collector Current (pulse) Note1	IC(pulse)	2.0	Α
Total Power Dissipation Note2	Рт	2.0	W
Junction Temperature	T_{j}	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Notes 1. PW \leq 10 ms, Duty Cycle \leq 50%

2. Mounted on ceramic substrate of 16 cm² x 0.7 mm

★ PACKAGE DRAWING (Unit: mm)



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ELECTRICAL CHARACTERISTICS (TA = 25°C)

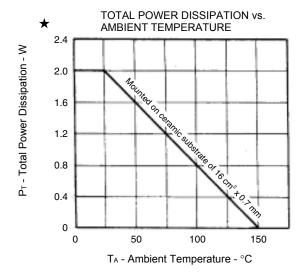
CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	Ices	V_{CE} = 45 V, R_{BE} = 0 Ω			0.5	μΑ
Emitter Cut-off Current	ІЕВО	V _{EB} = 4.0 V, I _C = 0 A			0.5	μΑ
DC Current Gain Note	h _{FE1}	VcE = 10 V, Ic = 50 mA	60		200	
	h _{FE2}	VcE = 10 V, Ic = 500 mA	60			
Collector Saturation Voltage Note	V _{CE(sat)}	Ic = 500 mA, Iв = 50 mA		0.17	0.4	V
Base Saturation Voltage Note	V _{BE(sat)}			0.90	1.2	٧
Gain Bandwidth Product	f⊤	VcE = 10 V, IE = -100 mA	300	380		MHz
Output Capacitance	Cob	V _{CB} = 10 V, I _E = 0, f = 1.0 MHz		6.7	10	pF
Turn-on Time	ton	$I_{C} = 500 \text{ mA}, I_{B1} = -I_{B2} = 50 \text{ mA}$		20	40	ns
Storage Time	t stg			55	80	ns
Turn-off Time	t off			72	100	ns

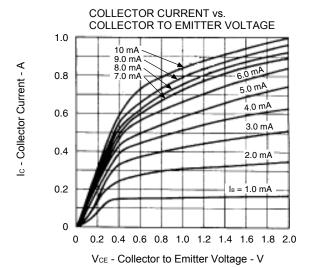
Note Pulsed: PW \leq 350 μ s, Duty Cycle \leq 2%

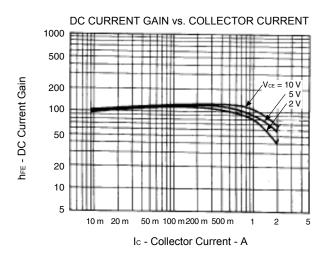
hfe CLASSIFICATION

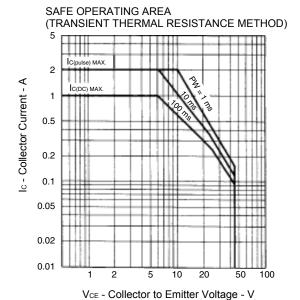
MARKING	OL	OK		
h _{FE1}	60 to 120	100 to 200		

TYPICAL CHARACTERISTICS (TA = 25°C)

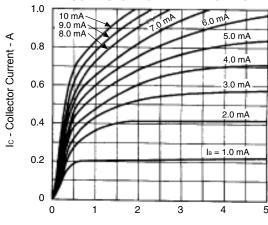




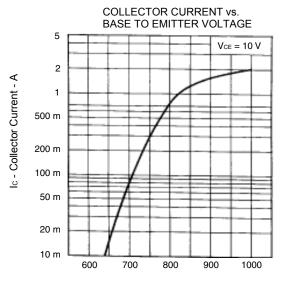




COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE

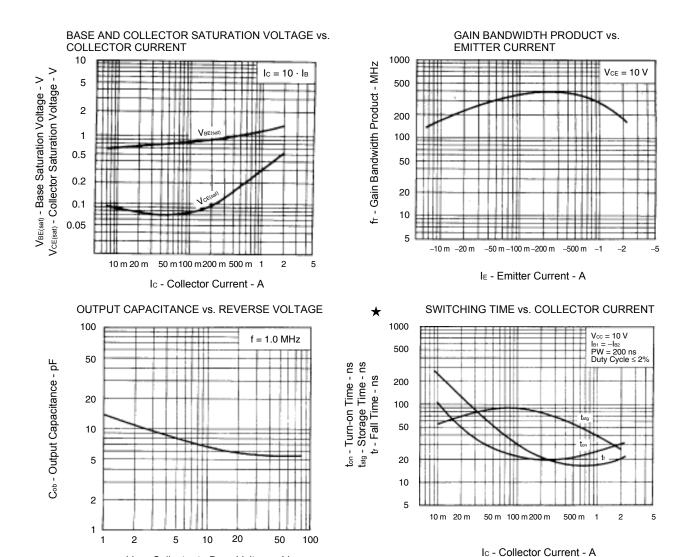


Vce - Collector to Emitter Voltage - V

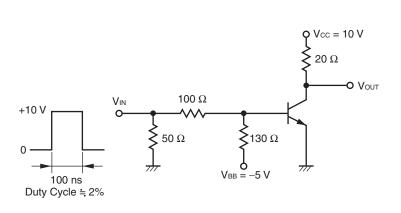


VBE - Base to Emitter Voltage - V

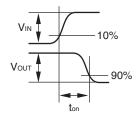
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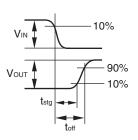


SWITCHING TIME TEST CIRCUIT



VcB - Collector to Base Voltage - V





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