

PNP SILICON POWER TRANSISTOR 2SA1156

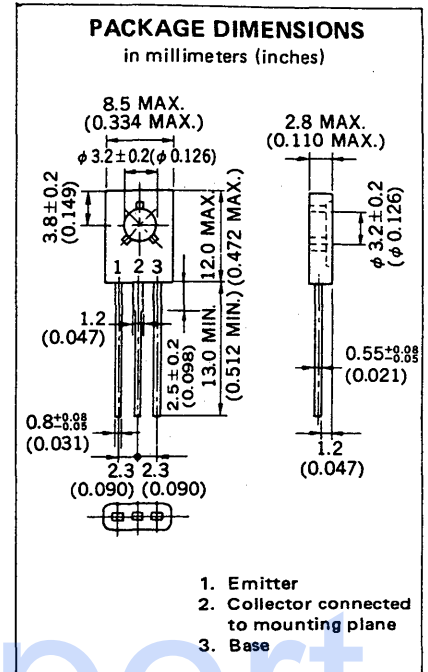
DESCRIPTION The 2SA1156 is suitable for Low Power Switching regulator, DC-DC converter and High Voltage Switch.

- FEATURES**
- High Breakdown Voltage.
 - Low Collector Saturation Voltage.
 - High Speed Switching.
 - Complementary to the NEC 2SC2752 NPN Transistor.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Junction Temperature	+150 °C Maximum
Maximum Power Dissipations	
Total Power Dissipation (T _a = 25 °C)	1.0 W
Total Power Dissipation (T _c = 25 °C)	10 W
Maximum Voltages and Currents (T _a = 25 °C)	
V _{CBO} Collector to Base Voltage	-400 V
V _{CEO} Collector to Emitter Voltage	-400 V
V _{EBO} Emitter to Base Voltage	-7.0 V
I _{C(DC)} Collector Current	-0.5 A
I _{C(pulse)} * Collector Current	-1.0 A
I _{B(DC)} Base Current	-0.25 A

* PW ≤ 10 ms, Duty Cycle ≤ 50 %



ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h _{FE} **	DC Current Gain	30		200	-	V _{CE} = -5.0 V, I _C = -100 mA
t _{on}	Turn On Time			1.0	μs	I _C = -100 mA, R _L = 1.5 kΩ I _{B1} = -10 mA, I _{B2} = 20 mA, V _{CC} = -150 V PW = 50 μs, Duty Cycle ≤ 2 %
t _{stg}	Storage Time			4.0	μs	
t _f	Fall Time			1.0	μs	
V _{CEO(SUS)}	Collector to Emitter Sustaining Voltage	-400			V	I _C = -100 mA, I _B = -10 mA, L = 20 mH
V _{CEX(SUS)}	Collector to Emitter Sustaining Voltage	-400			V	I _C = -200 mA, I _{B1} = -I _{B2} = -20 mA V _{BE(OFF)} = 5.0 V, L = 10 mH, Clamped.
I _{CBO}	Collector Cutoff Current			-100	μA	V _{CB} = -400 V, I _E = 0
I _{CX1}	Collector Cutoff Current			-100	μA	V _{CE} = -400 V, V _{BE(OFF)} = 1.5 V
I _{CX2}	Collector Cutoff Current			-1.0	mA	V _{CE} = -400 V, V _{BE(OFF)} = 1.5 V, T _a = 125 °C
I _{EBO}	Emitter Cutoff Current			-10	μA	V _{EB} = -5.0 V, I _C = 0
V _{CE(sat)**}	Collector Saturation Voltage			-1.0	V	I _C = -100 mA, I _B = -10 mA
V _{BE(sat)**}	Base Saturation Voltage			-1.2	V	I _C = -100 mA, I _B = -10 mA

** Pulsed / PW ≤ 350 μs, Duty Cycle ≤ 2 %

Classification of h_{FE}

Rank	N	M	L	K
Range	30 to 60	40 to 80	60 to 120	100 to 200

Test Conditions: V_{CE} = -5.0 V, I_C = -100 mA

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

