EVVOSEMI®
THINK CHANGE DO

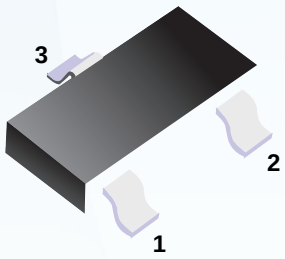
ESD TVS MOS LDO Diode Sensor DC-DC

Product Specification

Domestic Part Number	EV2SA812-S1
Overseas Part Number	2SA812
Equivalent Part Number	2SA812

"S1" means SOT-23

PNP Silicon Epitaxial Transistor



1.Base
2.Emitter
3.Collector

Simplified outline(SOT-23)

Features

- High DC Current Gain: h_{FE} = 200 TYP. (V_{CE} = -6.0 V, I_C = -1.0 mA)
- High Voltage: V_{CEO} = -50 V

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
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	-100	mA
power dissipation	P_C	200	mW
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	-55 to +150	℃

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = -60 V, I_E = 0 A			-0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = -5.0 V, I_C = 0 A			-0.1	μA
DC current gain *	h_{FE}	V_{CE} = -6.0 V, I_C = -1.0 mA	90	200	600	
Collector saturation voltage	$V_{CE(sat)}$	I_C = -100 mA, I_B = -10 mA		-0.18	-0.3	V
Base to emitter voltage	V_{BE}	V_{CE} = 6.0 V, I_C = -1.0 mA	-0.58	-0.62	-0.68	V
Output capacitance	C_{ob}	V_{CE} = -10 V, I_E = 0 A, f = 1.0 MHz		4.5		pF
Transition frequency	f_T	V_{CE} = -6.0 V, I_E = 10 mA		180		MHz

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

h_{FE} Classification

Marking	M4	M5	M6	M7
h_{FE}	90～180	135～270	200～400	300～600

■Typical Characteristics

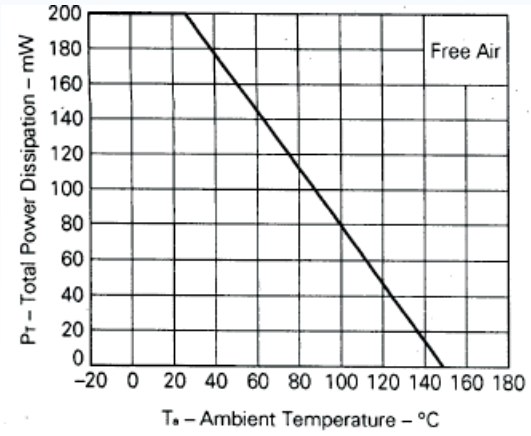


Fig.1 Total Power Dissipation vs. Ambient Temperature

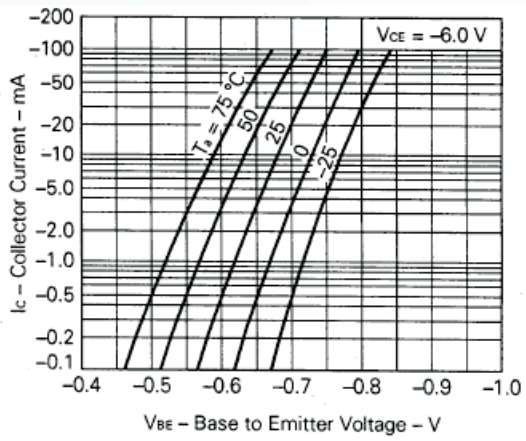


Fig.2 Collector Current vs. Base to Emitter Voltage

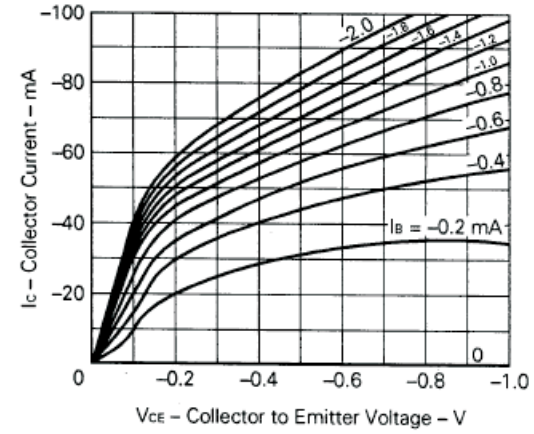


Fig.3 Collector Current vs. Collector to Emitter Voltage

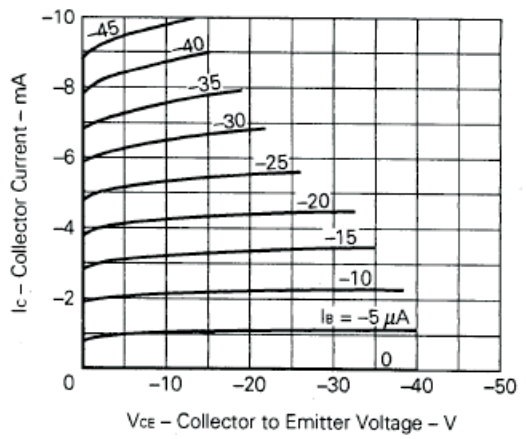


Fig.4 Collector Current vs. Collector to Emiiter Voltage

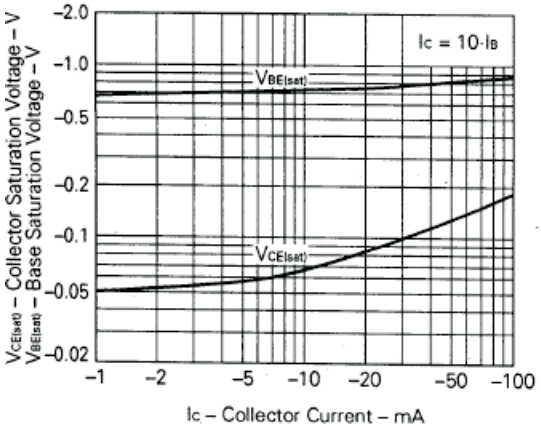


Fig.5 Base and Collector Saturation Voltage vs. Collector Current

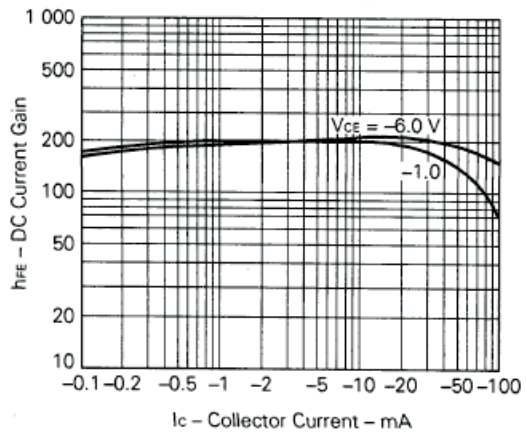
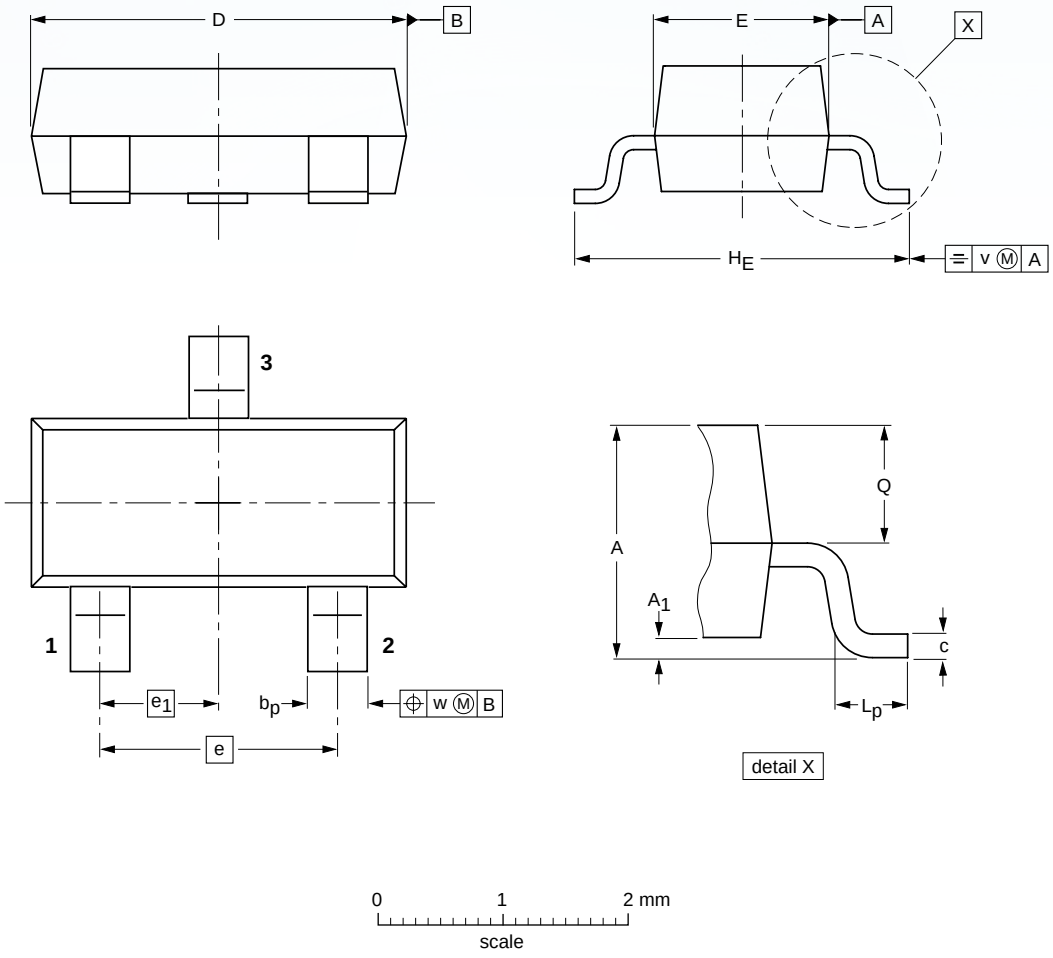


Fig.6 DC Current Gain vs. Collector Current

■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

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