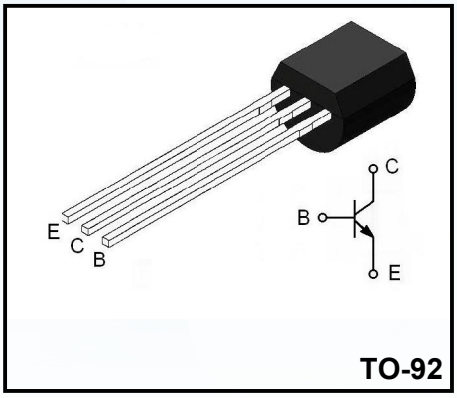
EVVOSEMI®
THINK CHANGE DO

ESD TVS MOS LDO Diode Sensor DC-DC

Product Specification

Domestic Part Number	2SC2240
Overseas Part Number	2SC2240
Equivalent Part Number	2SC2240

NPN Plastic-Encapsulate Transistors



TO-92

Applications

- Low frequency amplifier
- Low noise amplifier

FEATURES

- Low noise：

NF = 4dB (typ.) R_G = 100Ω , V_{CE} = 6V, I_C =100μA, f = 1kHz

NF = 0.5dB (typ.) R_G = 1 kΩ, V_{CE} = 6V, I_C =100 μA, f = 1kHz

- Low pulse noise: Low 1/f noise
- High DC current gain: h_{FE} = 200~700
- High breakdown voltage: V_{CEO} = 120V

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-base voltage	BV_{CBO}	120	V
Collector-emitter voltage	BV_{CEO}	120	V
Emitter-base voltage	BV_{EBO}	5	V
Collector current	I_C	100	mA
Base current	I_B	20	mA
Collector power dissipation	P_C	300	mW
Junction temperature	T_j	125	℃
Storage temperature	T_{stg}	-55～+125	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C = 100μA，I_E = 0	120			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	120			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	5			V
Collector cut-off current	I_{CBO}	V_{CB} =120V，I_E = 0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 6V，I_C = 0			0.1	μA
DC current gain	h_{FE}	V_{CE} = 6V，I_C= 2mA	200		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10mA，I_B = 1mA			0.3	V
Base-emitter voltage	$V_{BE(on)}$	V_{CE} = 6V，I_C= 2mA			1.0	V
Transition frequency	f_T	V_{CE} = 5V，I_B = 10mA		100		MH_Z
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f=1kHz		3		pF

h_{FE} Classification

Classification	G	BL
Range	200~400	350~700

Typical Characteristics

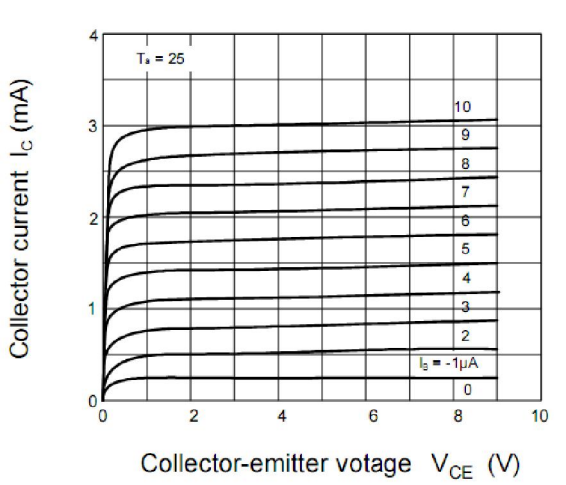


Figure 1. Static Characteristic

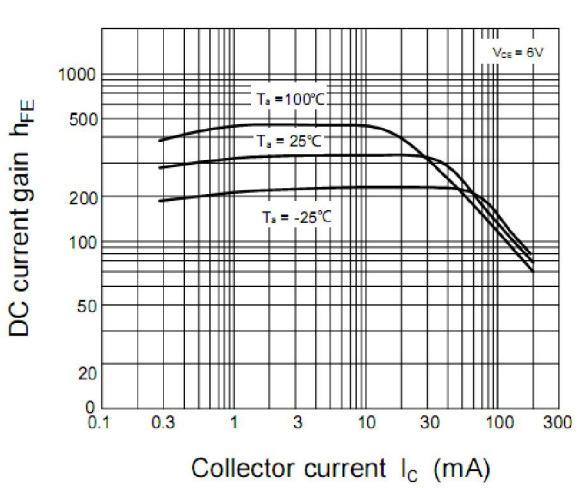


Figure 2. DC current Gain

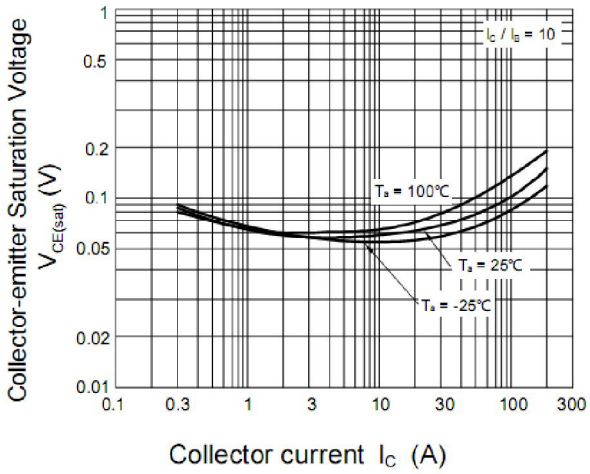


Figure 3. Collector-Emitter Saturation Voltage

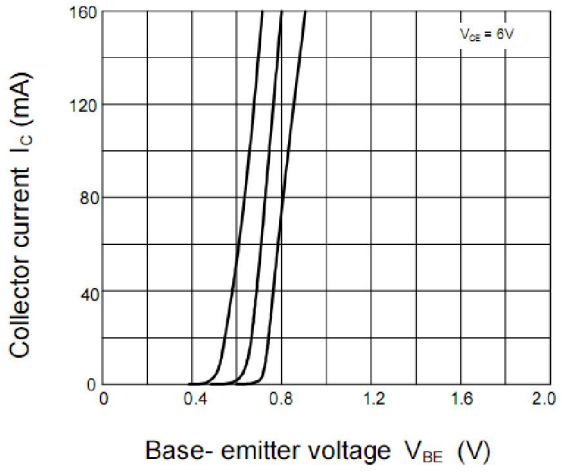


Figure 4. Base-Emitter Voltage

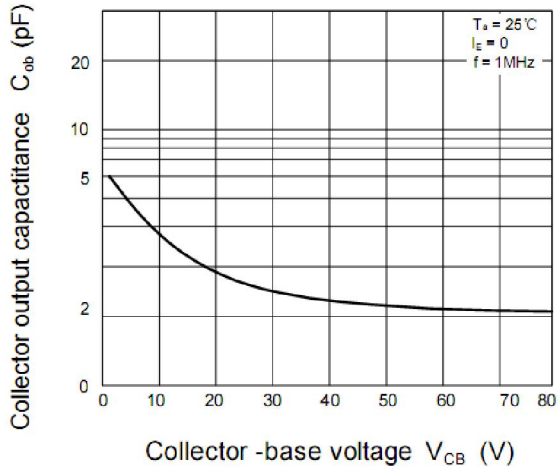


Figure 5. Output Capacitance

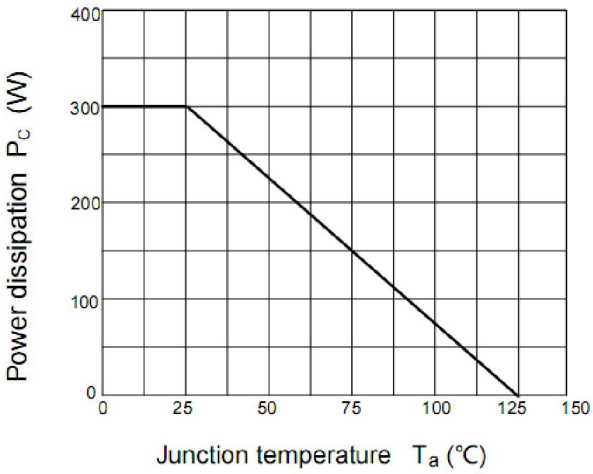


Figure 6. Power Derating

Package Dimensions

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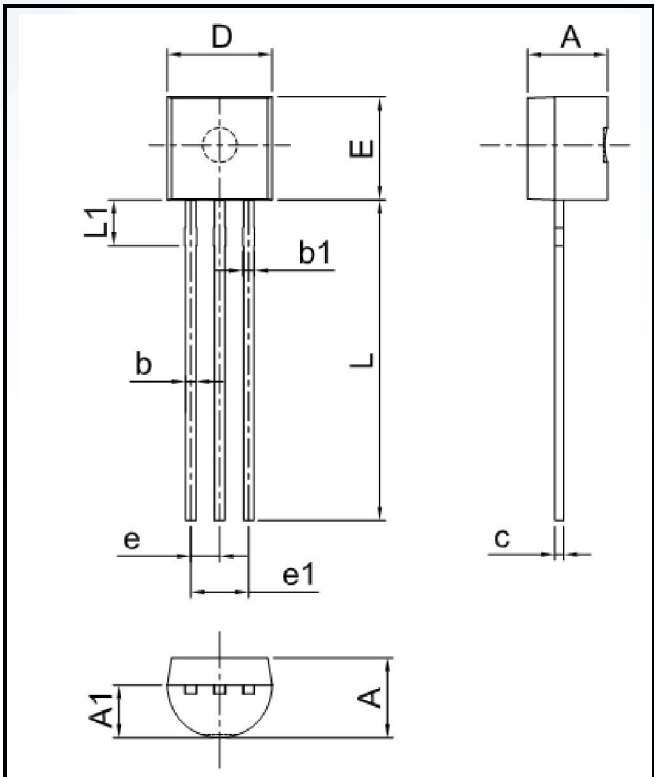

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

Package	Packing Method	Pack uantity
TO-92	Bulk	1000pcs/Bag
TO-92	Tape	2000pcs/Box

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