



## SOT-89 Plastic-Encapsulated Transistors

### 2SA1213 TRANSISTOR (PNP)

#### FEATURES

Power dissipation

$$P_{CM} : 0.5 \text{ W (Tamb=25°C)}$$

Collector current

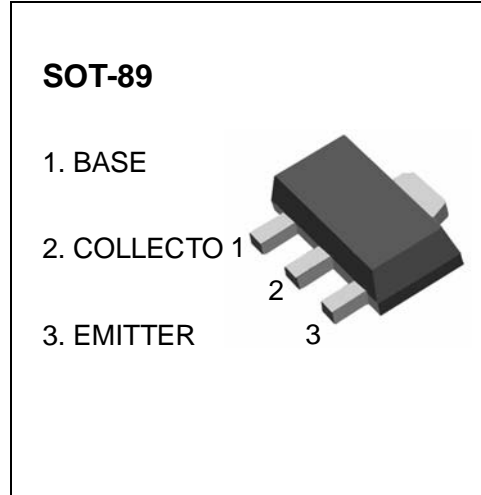
$$I_{CM} : -2 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -50 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg} : -55°C \text{ to } +150°C$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50 \text{ V}, I_E = 0$		-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 \text{ V}, I_C = 0$		-0.1	$\mu A$
DC current gain	$h_{FE1}$	$V_{CE} = -2V, I_C = -0.5A$	70	240	
	$h_{FE2}$	$V_{CE} = -2V, I_C = -2A$	20		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = -1A, I_B = -0.05A$		-0.5	V
Base-emitter saturation voltage	$V_{BEsat}$	$I_C = -1A, I_B = -0.05A$		-1.2	V
Transition frequency	$f_T$	$V_{CE} = -2V, I_C = -0.5A$	100		MHz

#### CLASSIFICATION OF $h_{FE}$

Rank	O	Y
Range	70-140	120-240

Marking	NO,NY
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