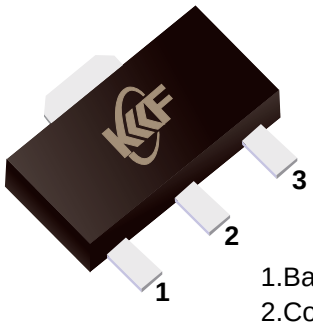
2SA1013

PNP Transistors



1.Base
2.Collector
3.Emitter

Simplified outline(SOT-89)

Features

- High voltage
- Large continuous collector current capability

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-160	V
Collector - Emitter Voltage	V_{CEO}	-160	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-1	A
Collector Power Dissipation	P_C	0.5	W
T hermal Resistance from Junction to Ambient	$R_{\theta JA}$	250	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

Electrical Characteristics Ta = 25℃

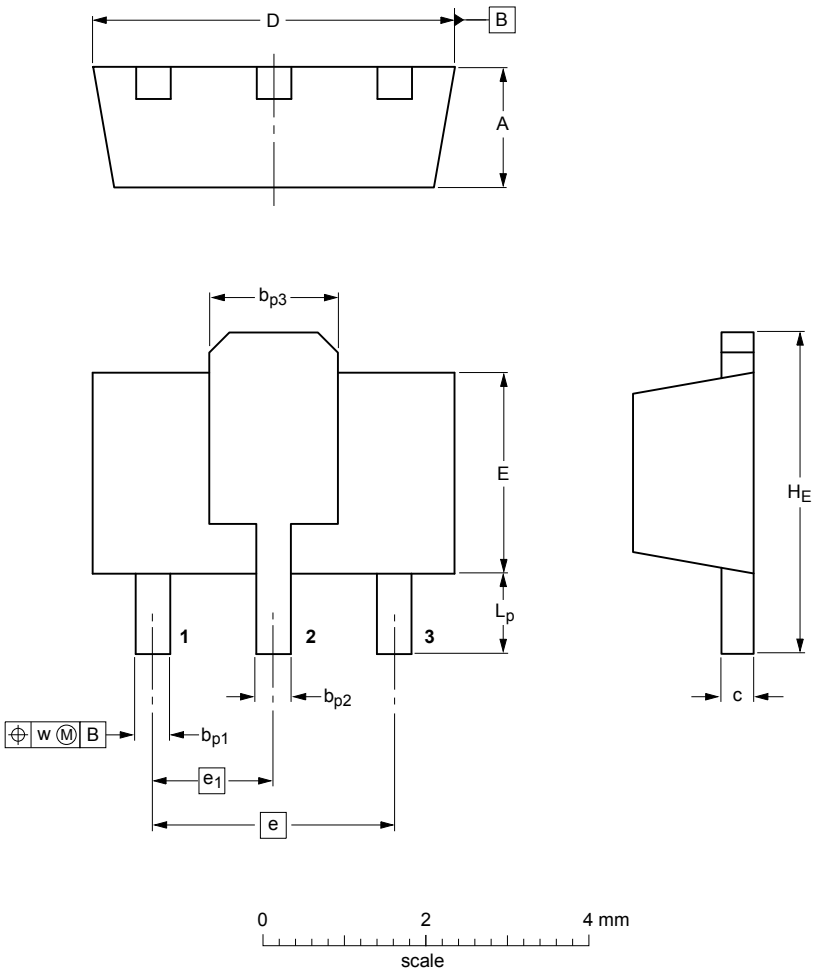
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA, I_E=0	-160			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-160			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -150 V , I_E=0			-1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500 mA, I_B=-50mA			-1.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C= -500 mA, I_B=- 50mA			-1.2	
Base - emitter voltage	V_{BE}	V_{CE}= -5V, I_C= -5mA			-0.75	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -200mA	60		320	
Transition frequency	f_T	V_{CE}= -5V, I_C= -200mA	15			MHz

Classification of h_{fe}

Type	2SA1013-R	2SA1013-O	2SA1013-Y
Range	60-120	100-200	160-320
Marking	1013R	1013O	1013Y

2SA1013

■ SOT-89



DIMENSIONS (mm are the original dimensions)

UNIT	A	b_{p1}	b_{p2}	b_{p3}	c	D	E	e	e_1	H_E	L_p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13