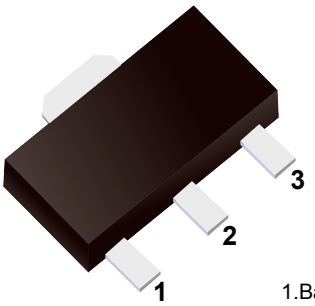
2SA1661

PNP Transistors



1.Base
2.Collector
3.Emitter

■ Simplified outline(SOT-89)

■ Features

- High Voltage
- High Transition Frequency
- Small Flat Package

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-120	V
Collector - Emitter Voltage	V_{CEO}	-120	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-800	mA
Base Current	I_B	-160	
Collector Power Dissipation	P_C	500	mW
		1	W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

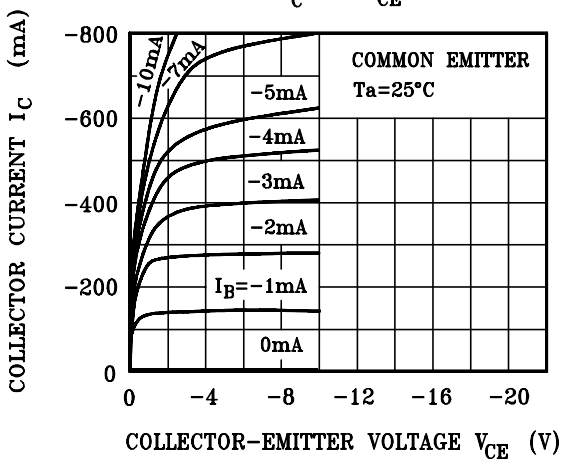
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -1mA, I_E=0	-120			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -10 mA, I_B=0	-120			
Emitter - base breakdown voltage	V_{EBO}	I_E= -1mA, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -120 V , I_E=0			-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500 mA, I_B=-50mA			-1	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= -500mA			-1	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -100mA	80		240	
Collector output capacitance	C_{ob}	V_{CB}= -10V, I_E= 0,f=1MHz			30	pF
Transition frequency	f_T	V_{CE}= -5V, I_C= -100mA		120		MHz

■ Classification of h_{fe}

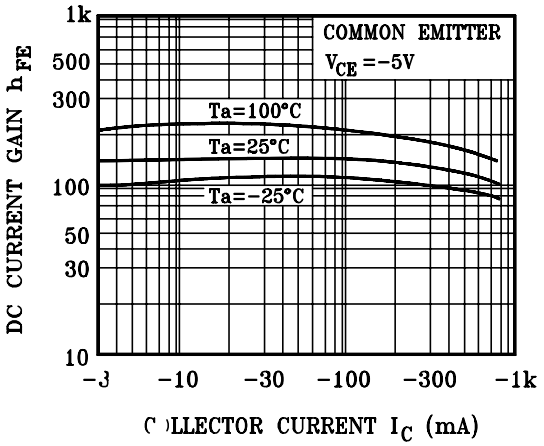
Type	2SA1661-O	2SA1661-Y
Range	80-160	120-240
Marking	DO	DY

■ Typical Characterisitics

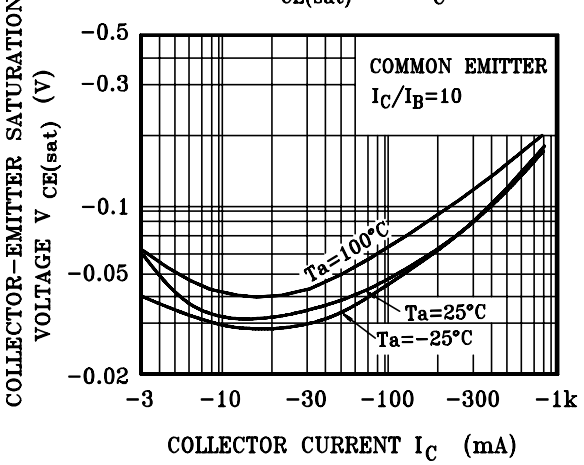
I_C – V_{CE}



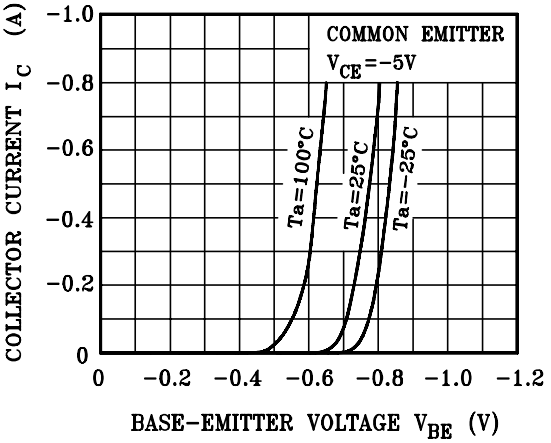
h_{FE} – I_C



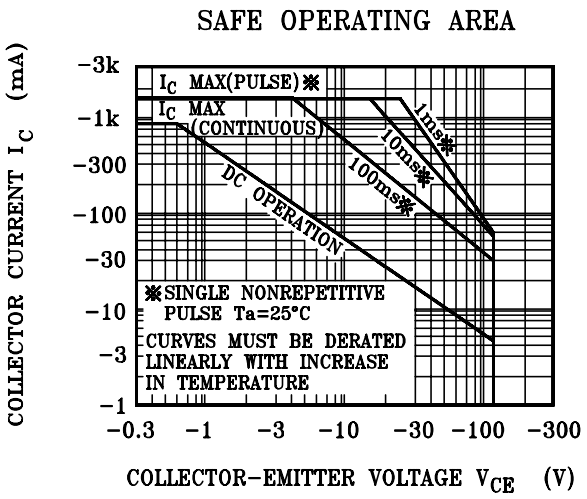
$V_{CE(sat)}$ – I_C



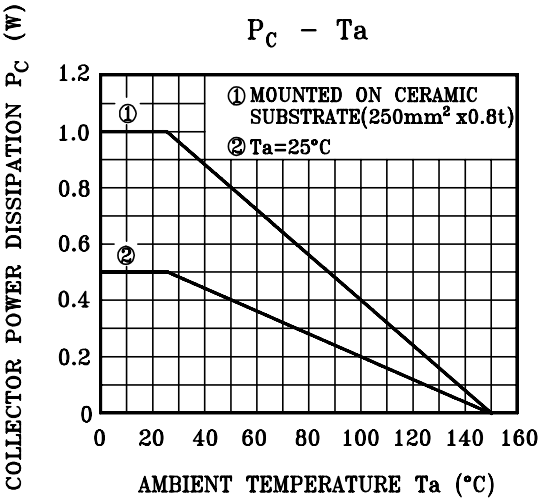
I_C – V_{BE}



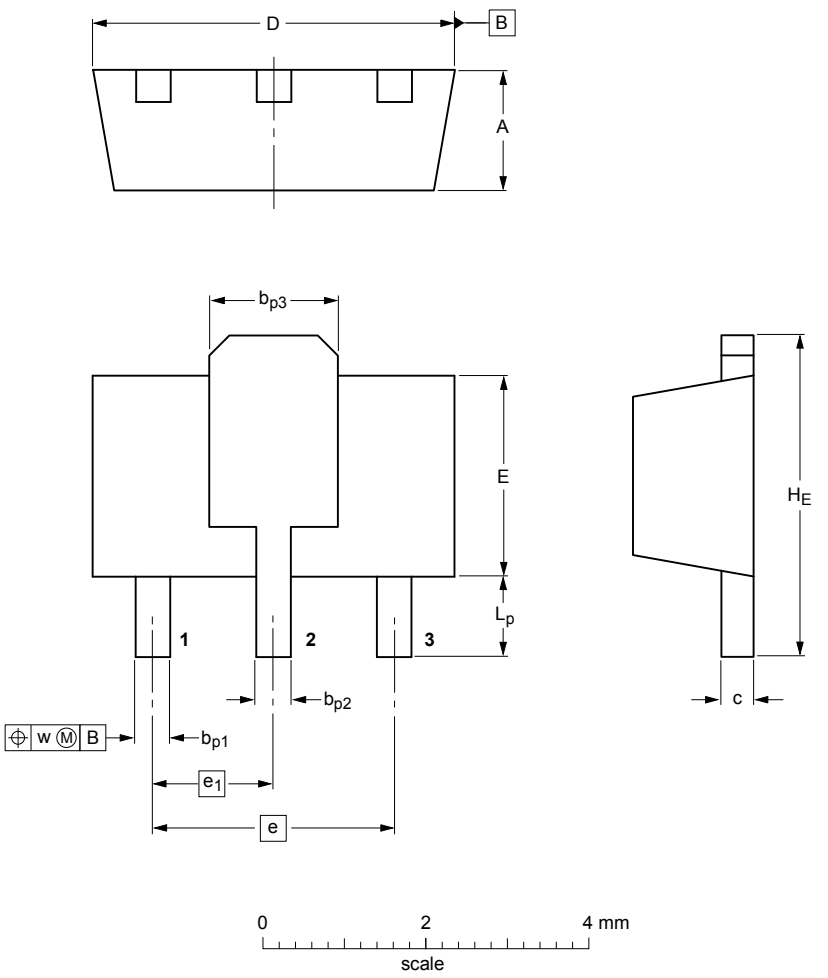
SAFE OPERATING AREA



P_C – Ta



■ 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