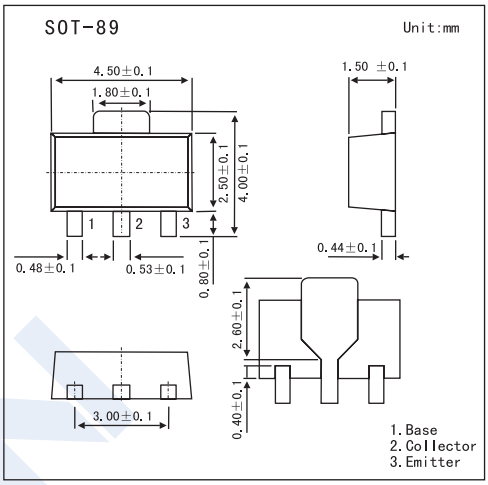
High Voltage Switching Applications

2SA1200



■ Features

- High Voltage : V_{CEO} = -150V
- High Transition Frequency : f_T = 120MHz(typ.)
- Small Flat Package
- Complementary to 2SC2880

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	-150	V
Collector-Base Voltage	V_{CBO}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-50	mA
Base Current	I_B	-10	mA
Collector Power Dissipation	P_C	500	mW
Jumction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

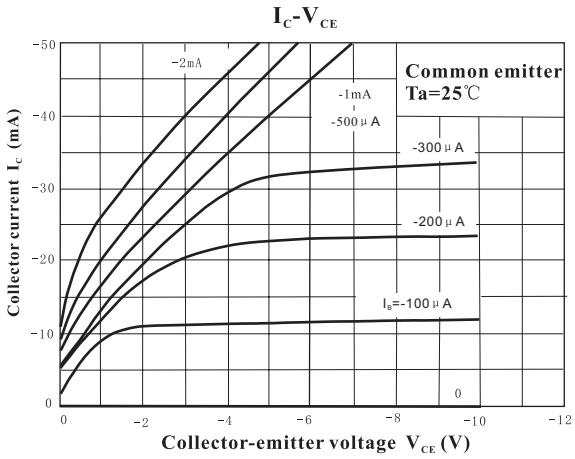
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V , I_C = 0			-0.1	μA
Collector Cut-off Current	I_{CBO}	V_{CB} = -150V , I_E = 0			-0.1	μA
DC Current Gain	h_{FE}	V_{CE} = -5V , I_C = -10mA	70		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -10mA , I_B = -1mA			-0.8	V
Base-Emitter Voltage	V_{BE}	V_{CE} = -5V , I_C = -30mA			-0.9	V
Transtion Frequency	f_T	V_{CE} = -30V , I_C = -10mA		120		MHz
Collector Output Capacitance	C_{ob}	V_{CB} = -10V , I_E = 0 , f = 1MHz		4.0	5.0	pF

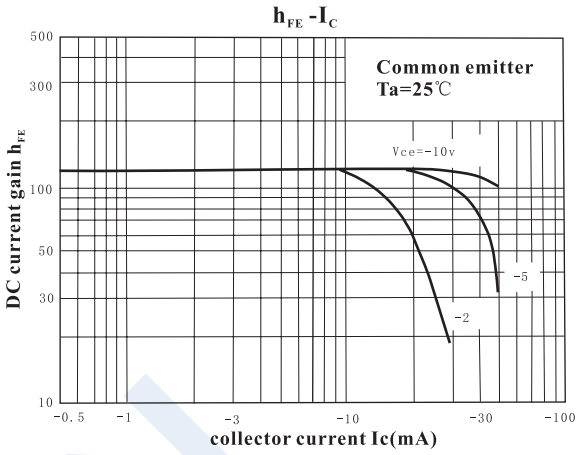
■ h_{FE} Classification

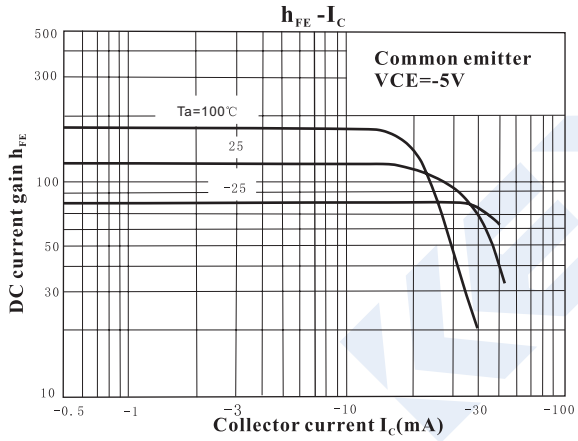
Marking	B	
Rank	O	Y
hFE	70～140	120～240

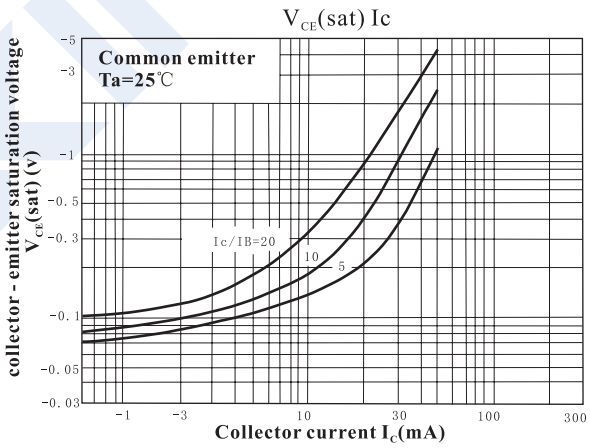
2SA1200

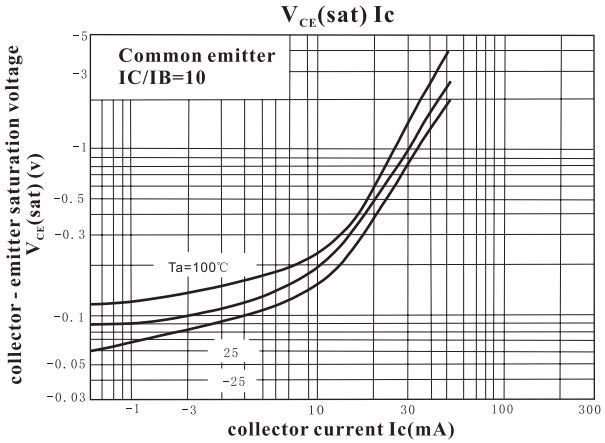
■ Electrical Characteristics Curves

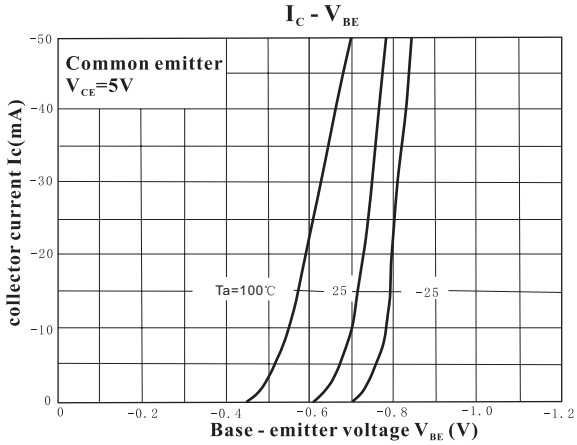












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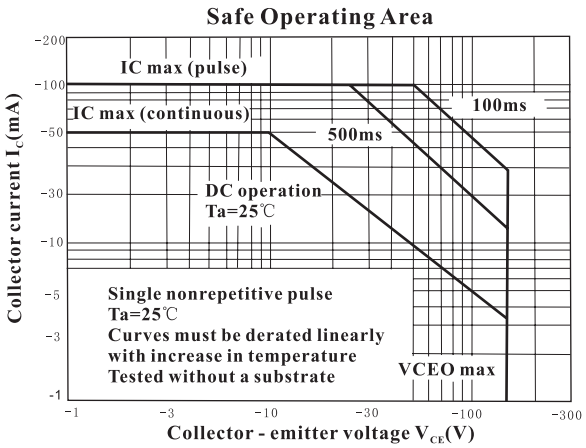
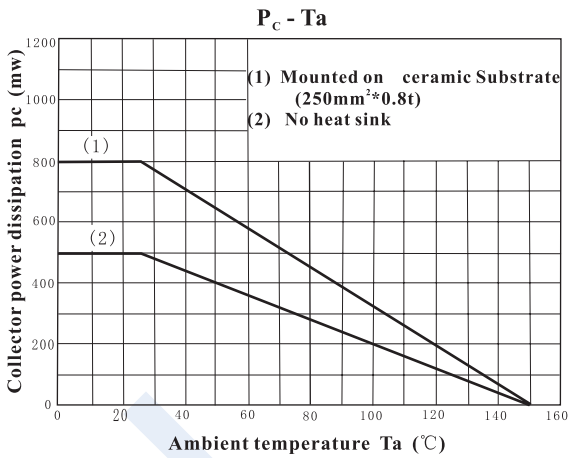

Safe Operating Area
IC max (pulse)
IC max (continuous)
100ms
500ms
DC operation
Ta=25℃
Single nonrepetitive pulse
Ta=25℃
Curves must be derated linearly
with increase in temperature
Tested without a substrate
VCEO max
Collector current Ic(mA)
Collector - emitter voltage VCE(V)
-200
-100
-50
-30
-10
-5
-3
-1
-1
-3
-10
-30
-100
-300


PC - Ta
(1) Mounted on ceramic Substrate
(250mm²*0.8t)
(2) No heat sink
(1)
(2)
Collector power dissipation pc (mw)
Ambient temperature Ta (℃)
1200
1000
800
600
400
200
0
0
20
40
60
80
100
120
140
160