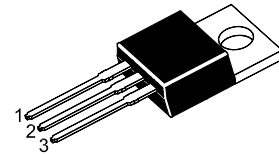


# 2SA1012

## PNP Silicon Epitaxial Planar Transistor

for high current switching applications.

The transistor is subdivided into two group, O and Y, according to its DC current gain.



1.Base 2.Collector 3.Emitter

TO-220 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	5	A
Power Dissipation	$P_{tot}$	25	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150	$^\circ\text{C}$

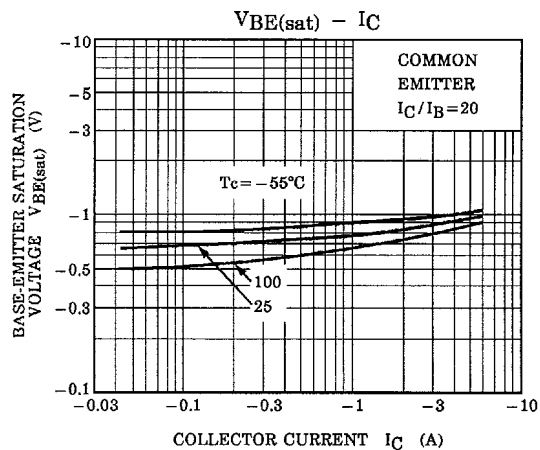
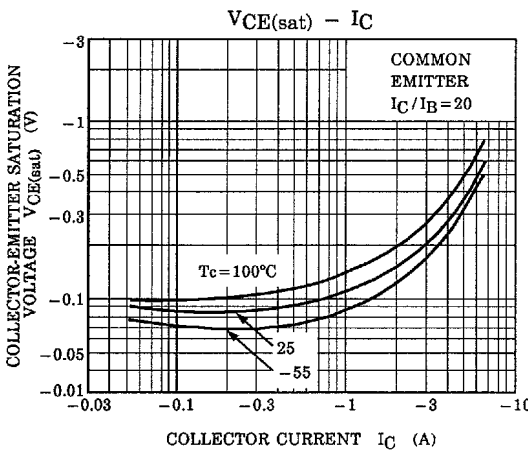
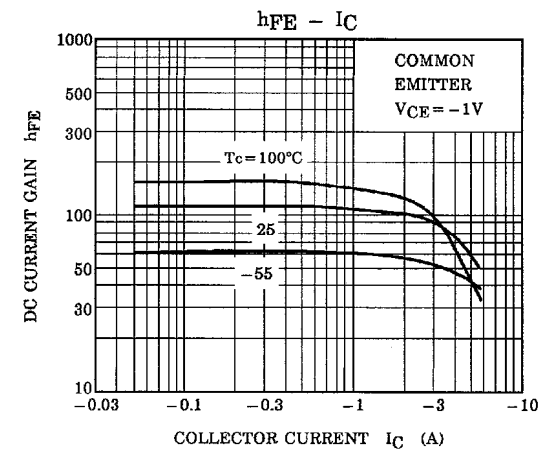
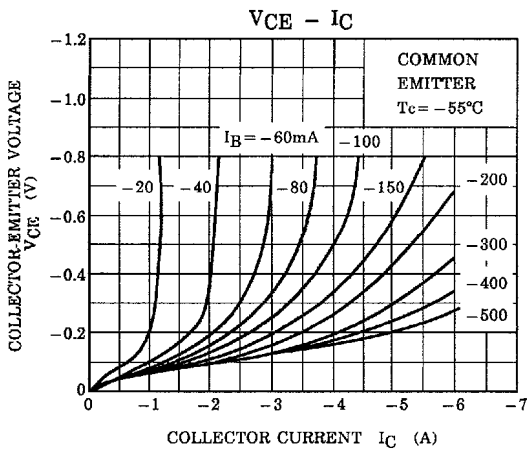
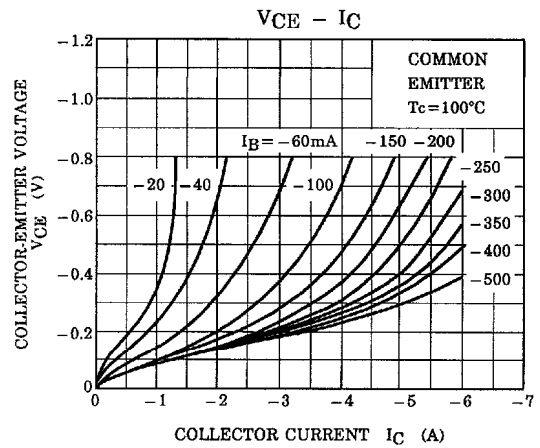
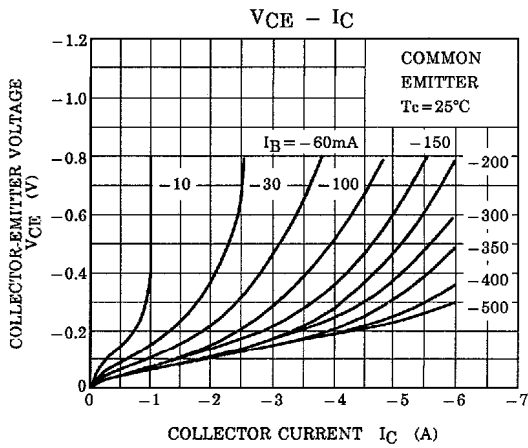
### Characteristics at $T_{amb} = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 1\text{ V}$ , $-I_C = 1\text{ A}$  at $-V_{CE} = 1\text{ V}$ , $-I_C = 3\text{ A}$	O	$h_{FE}$	70	-	140	-
	Y	$h_{FE}$	120	-	240	-
		$h_{FE}$	30	-	-	-
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V	
Collector Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	1	$\mu\text{A}$	
Emitter Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	1	$\mu\text{A}$	
Collector Emitter Saturation Voltage at $-I_C = 3\text{ A}$ , $-I_B = 0.15\text{ A}$	$-V_{CE(sat)}$	-	-	0.4	V	
Base Emitter Saturation Voltage at $-I_C = 3\text{ A}$ , $-I_B = 0.15\text{ A}$	$-V_{BE(sat)}$	-	-	1.2	V	
Transition Frequency at $-V_{CE} = 4\text{ V}$ , $-I_C = 1\text{ A}$	$f_T$	-	60	-	MHz	
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	170	-	pF	

**TOP DYNAMIC**

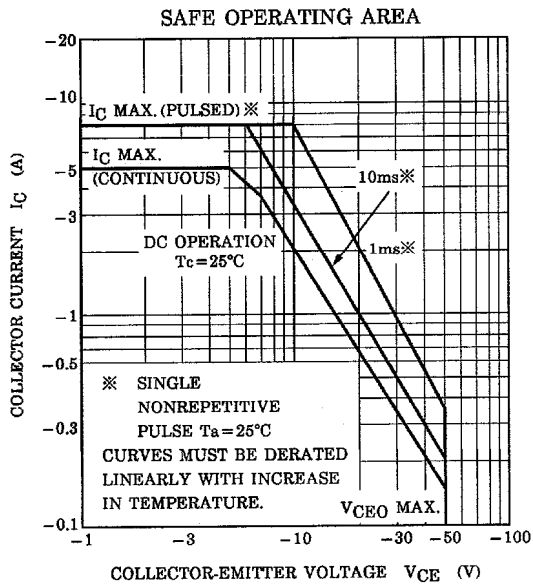
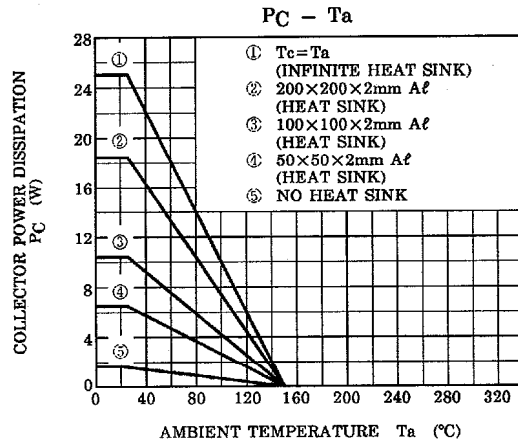
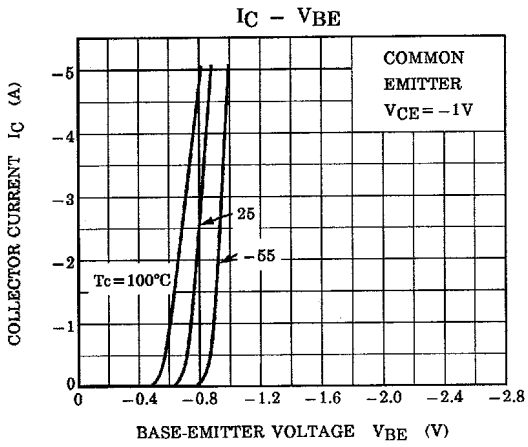


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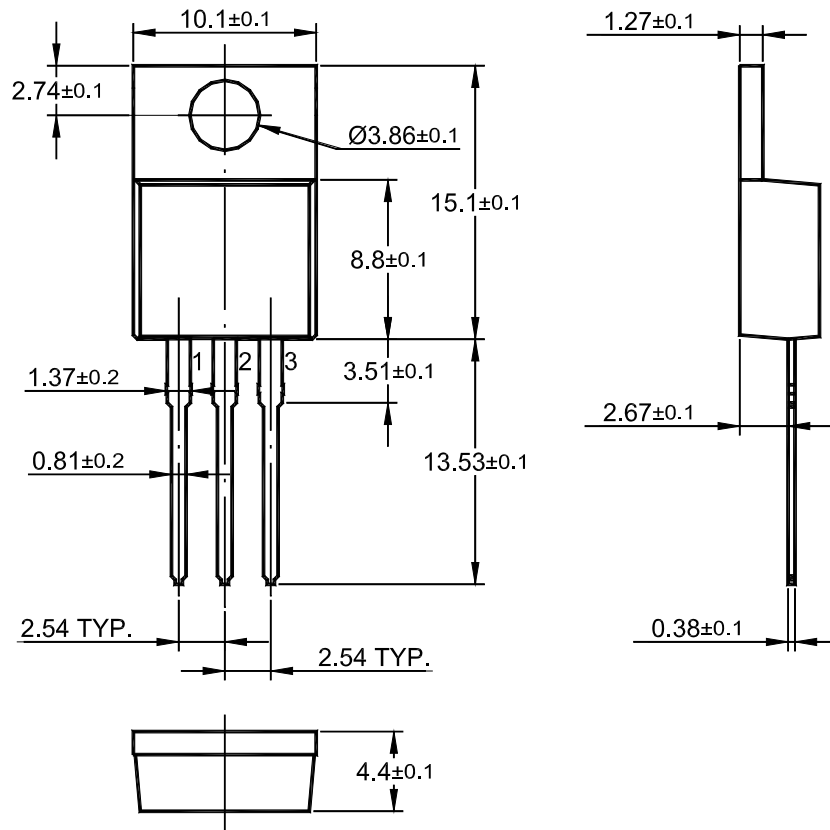
**TOP DYNAMIC**





# 2SA1012

## TO-220 PACKAGE OUTLINE



Dimensions in mm

**TOP DYNAMIC**



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