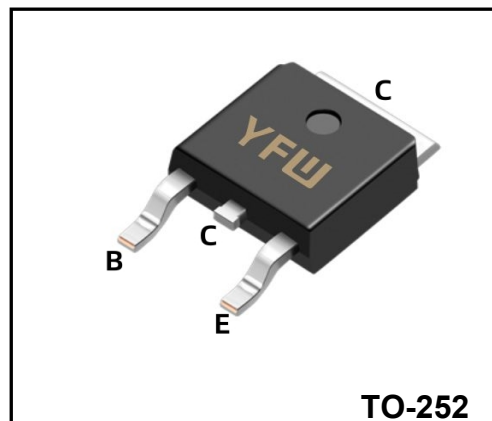


NPN Plastic-Encapsulate Transistors

FEATURES

- ◆High breakdown Voltage
- ◆High DC Current Gain
- ◆Complementary to with 2SA1013AD



Absolute Maximum Rating ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	160	V
Collector-Emitter Voltage	BV_{CEO}	160	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	1	A
Collector Power Dissipation	P_C	1.5	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	160			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$	160			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$, $I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 150\text{V}$, $I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			1	μA
DC current gain	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 200\text{mA}$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 50\text{mA}$			1.5	V
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE} = 5\text{V}$, $I_C = 5\text{mA}$			0.75	V
Transition frequency	f_T	$V_{CE} = 5\text{V}$, $I_C = 200\text{mA}$	20			MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			20	pF

h_{FE} Classification

Classification	2SC2383AD-R	2SC2383AD-O	2SC2383AD-Y
Range	60-120	100-200	160-320

Typical Characteristics

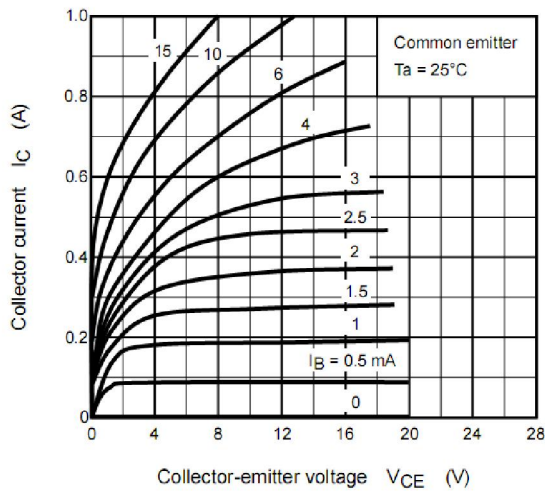


Figure 1. Static Characteristic

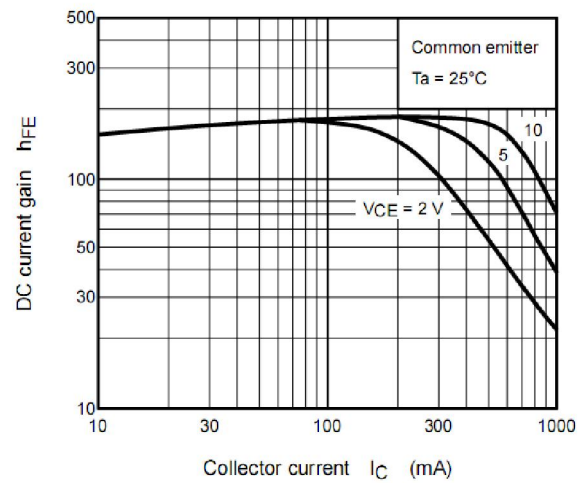


Figure 2. DC current Gain

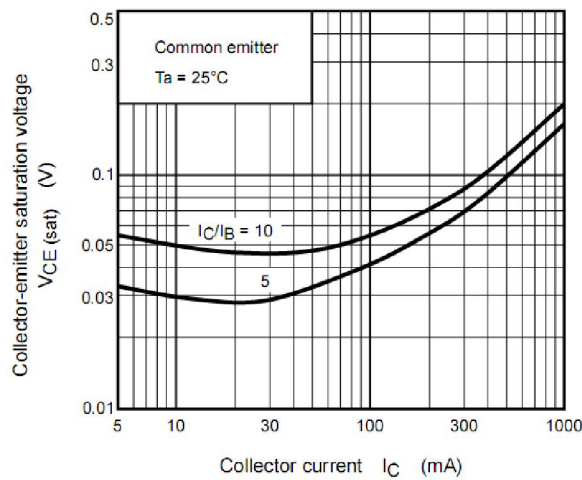


Figure 3. Saturation Voltage

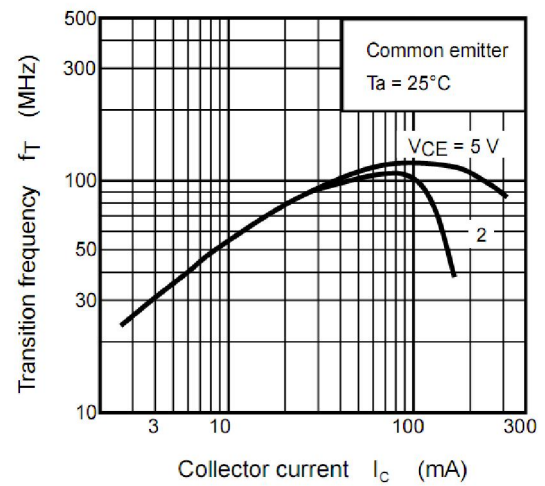


Figure 4. Current Gain Bandwidth Product

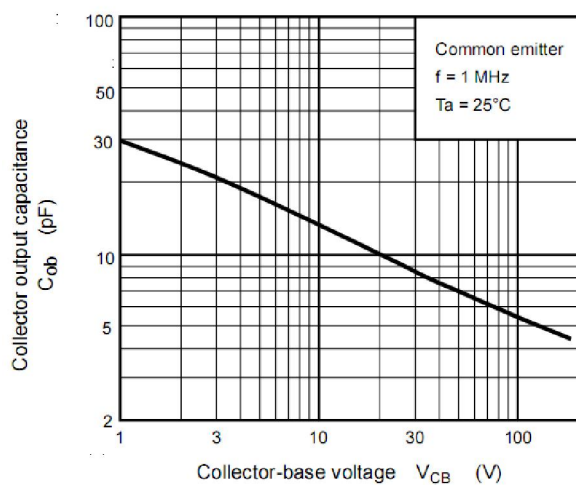


Figure 5. Collector Output Capacitance

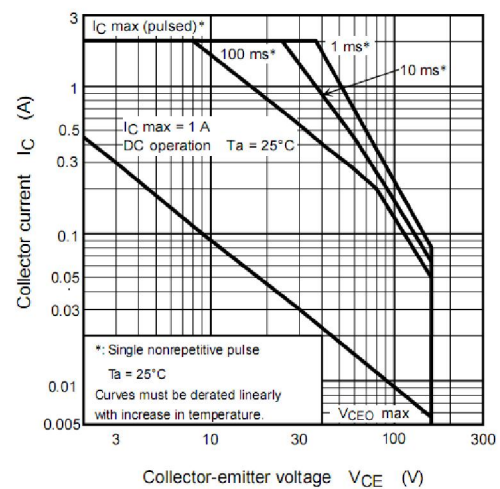
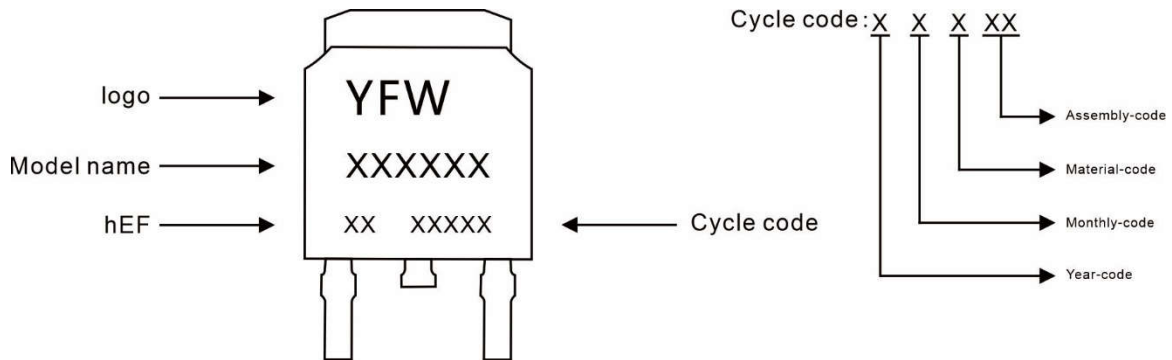


Figure 6. Safe Operating Area

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
2SC2383AD	TO-252	0.011oz(0.32g)	2500pcs/reel	5000pcs/box 25000pcs/Carton

Package Dimensions TO-252

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	10.00	11.00	0.393	0.433
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059

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