

2SC4015

Transistor, NPN

Features

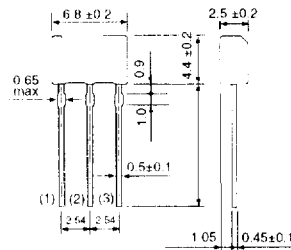
- available in ATV TV2 package
- high collector breakdown voltage, typically $BV_{CEO} = 300\text{ V}$
- small collector output capacitance
- ideal for use in color TV chroma output and video signal amplifiers

Applications

- high voltage amplifier

Dimensions (Units : mm)

2SC4015 (ATV TV2)



- (1) Emitter
- (2) Collector
- (3) Base

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	300	V	
Collector-to-emitter voltage	V_{CEO}	300	V	
Emitter-to-base voltage	V_{EBO}	5	V	
Collector current	I_C	100	mA	
Collector dissipation	P_C	1	W	Collector copper foil area must be 1 cm^2 . Board must be 1.7 mm thick.
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$	

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

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	300			V	$I_C = 50 \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	300			V	$I_C = 100 \mu\text{A}$
Emitter-to-base breakdown voltage	BV_{EBO}	5			V	$I_E = 50 \mu\text{A}$
Collector cutoff current	I_{CBO}			500	nA	$V_{CB} = 200 \text{ V}$
Emitter cutoff current	I_{EBO}			500	nA	$V_{EB} = 4 \text{ V}$
DC current gain	h_{FE}	39		180		$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			2.0	V	$I_C / I_B = 50 \text{ mA} / 5 \text{ mA}$
Transition frequency	f_T	50	100		MHz	$V_{CE} = 30 \text{ V}, I_E = -10 \text{ mA}, f = 30 \text{ MHz}$
Output capacitance	C_{ob}		3.0		pF	$V_{CB} = 30 \text{ V}, I_E = 0 \text{ A}, f = 1 \text{ MHz}$

h_{FE} rankings

Item	M	N	P
h_{FE}	39 ~ 82	56 ~ 120	82 ~ 180

Electrical characteristic curves

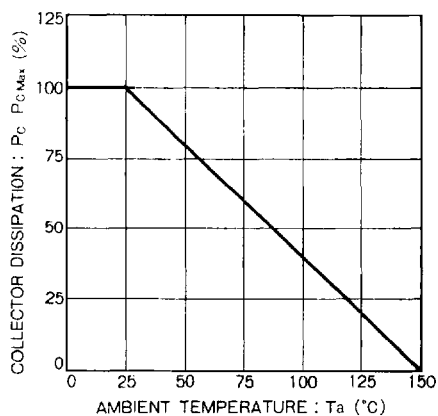


Figure 1

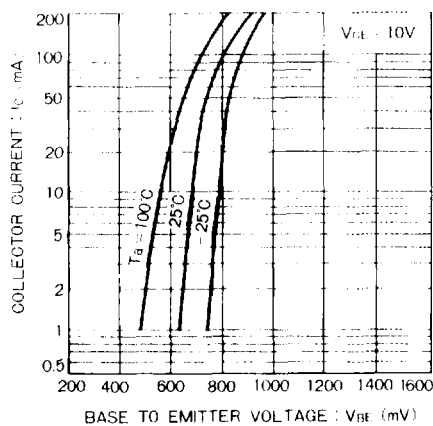


Figure 2

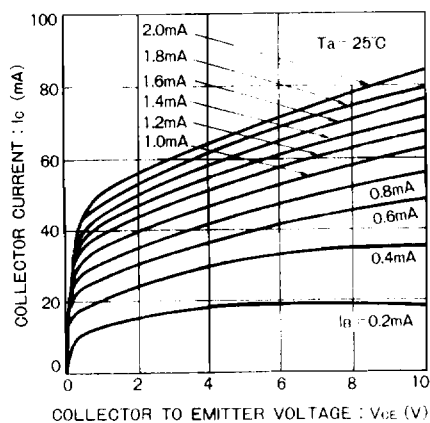


Figure 3

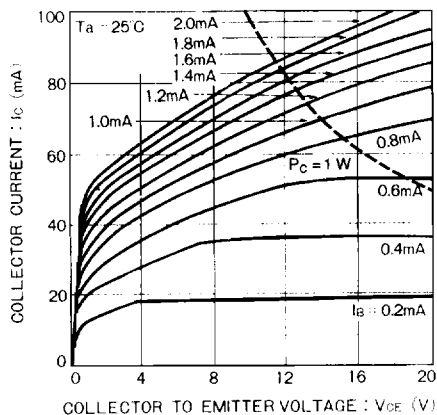


Figure 4

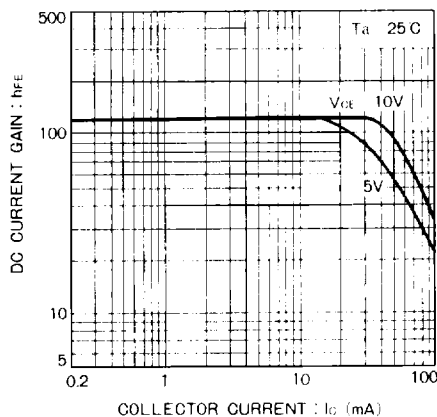


Figure 5

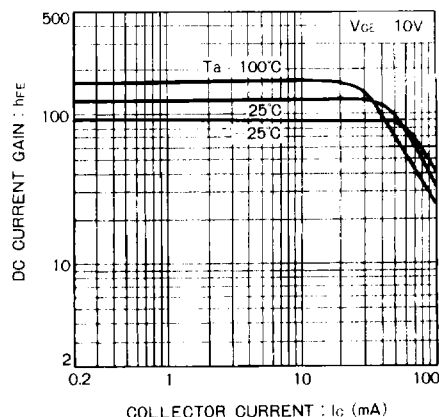


Figure 6

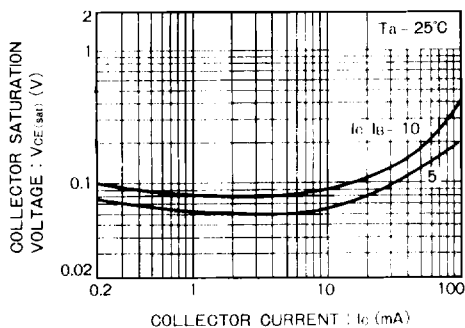


Figure 7

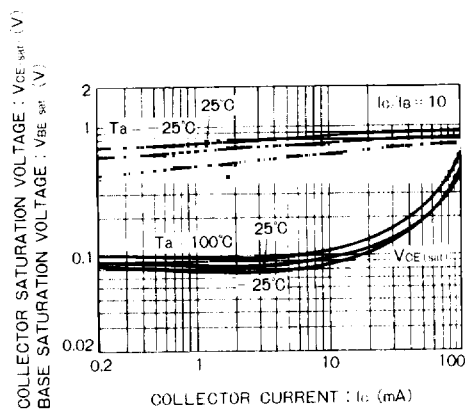


Figure 8

2SC4015 Transistor, NPN, 2SC Series

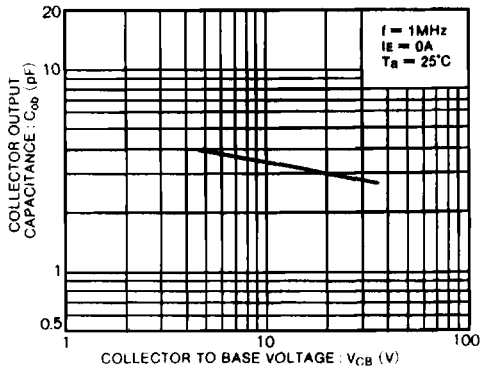


Figure 9

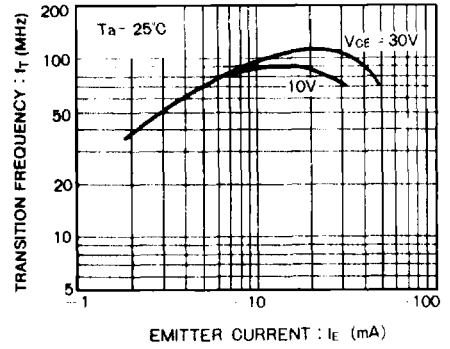


Figure 10

Ordering information

Package	Tape
Code	TL2
Basic order quantity	2 500
2SC4015	★
★ = Standard, ☆ = Semi-standard, * = Special order	