Chroma amplifier transistor (300V, 0.1A)

2SC4061K / 2SC3415S / 2SC4015

●Features

1) High breakdown voltage. (BV_{CEO}=300V)
2) Low collector output capacitance.
   (Typ. 3pF at V_{CB}=30V)
3) Ideal for chroma circuit.

●Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	300	V
Collector-emitter voltage		V_{CEO}	300	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	100	mA
Collector power dissipation	2SC4061K	P_C	0.2	W
	2SC3415S		0.3	
	2SC4015		1 *	
Junction temperature		Tj	150	°C
Storage temperature		Tstg	−55 to +150	°C

* Printed circuit board 1.7mm thick, collector plating 1cm² or larger.

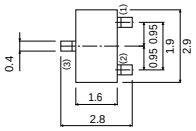
●Packaging specifications and h_{FE}

Type	2SC4061K	2SC3415S	2SC4015
Package	SMT3	SPT	ATV
h_{FE}	NP	NP	NP
Marking	AN*	–	–
Code	T146	TP	TV2
Basic ordering unit (pieces)	3000	5000	2500

* Denotes h_{FE}

●External dimensions (Unit : mm)

2SC4061K

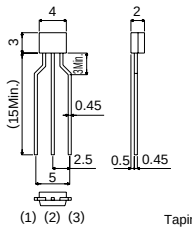


(1) Emitter
(2) Base
(3) Collector

ROHM : SMT3
EIAJ : SC-59

Each lead has same dimensions

2SC3415S

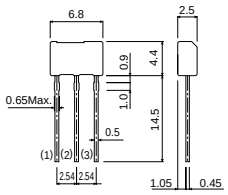


(1) Emitter
(2) Collector
(3) Base

ROHM : SPT
EIAJ : SC-72

Taping specifications

2SC4015



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

ROHM : ATV

Taping specifications

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	300	–	–	V	I_C=50μA
Collector-emitter breakdown voltage	BV_{CEO}	300	–	–	V	I_C=100μA
Emitter-base breakdown voltage	BV_{EBO}	5	–	–	V	I_E=50μA
Collector cutoff current	I_{CBO}	–	–	0.5	μA	V_{CB}=200V
Emitter cutoff current	I_{EBO}	–	–	0.5	μA	V_{EB}=4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	2	V	I_C/I_B=50mA/5mA
DC current transfer ratio	h_{FE}	56	–	180	–	V_{CE}/I_C=10V/10mA
Gain bandwidth product	f_T	50	100	–	MHz	V_{CE}=30V, I_E=−10mA, f=30MHz
Collector output capacitance	Cob	–	3	–	pF	V_{CB}=30V, I_E=0A, f=1MHz

●Electrical characteristics curves

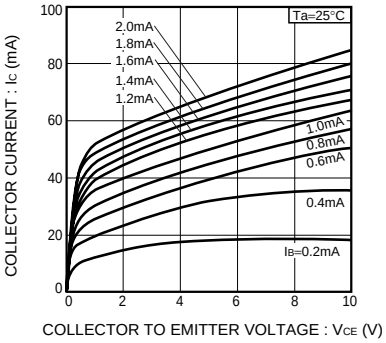


Fig.1 Ground emitter output characteristics (I)

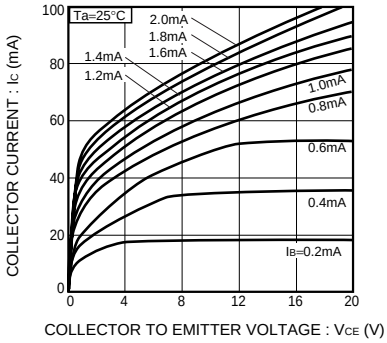


Fig.2 Ground emitter output characteristics (II)

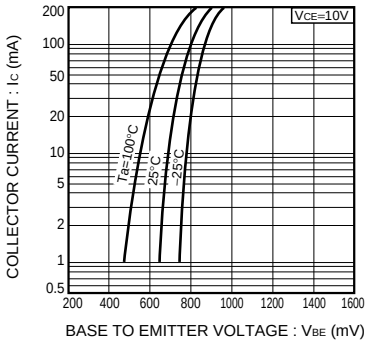


Fig.3 Ground emitter propagation characteristics

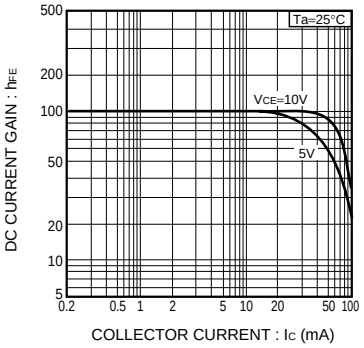


Fig.4 DC current gain vs. collector current (I)

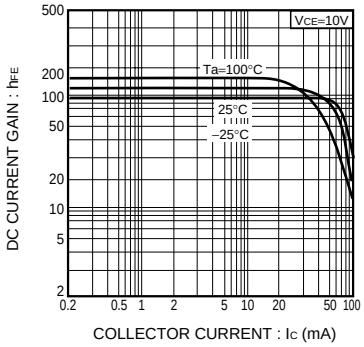


Fig.5 DC current gain vs. collector current (II)

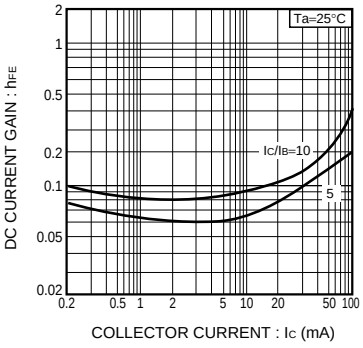


Fig.6 Collector-emitter saturation voltage vs. collector current

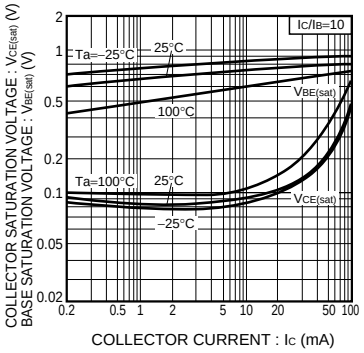


Fig.7 Collector-emitter saturation voltage Base-emitter saturation voltage vs. collector current

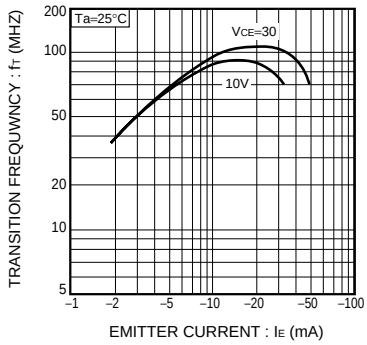


Fig.8 Gain bandwidth product vs. emitter current

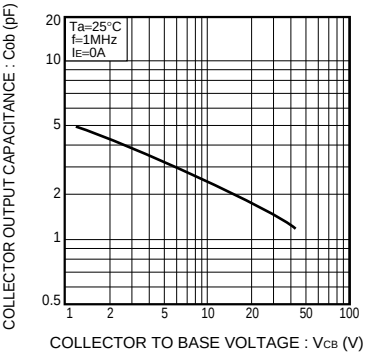


Fig.9 Collector output capacitance vs. collector-base voltage

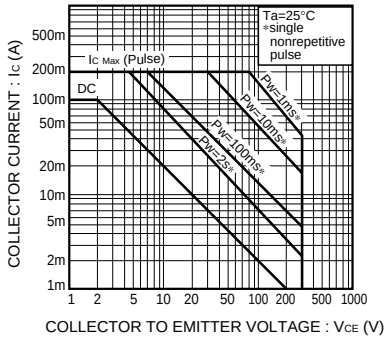


Fig.10 Safe operating area

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