



2SC4412

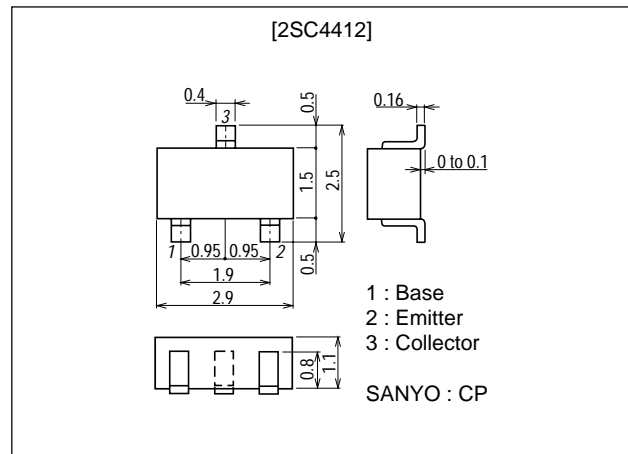
TV Camera Deflection High-Voltage Driver Applications

Features

- High breakdown voltage($V_{CEO} \geq 300V$).
- Small reverse transfer capacitance and excellent high frequency characteristic($C_{re} : 1.0pF$ typ).
- Excellent DC current gain ratio(h_{FE} ratio : 0.95 typ).
- Adoption of FBET process.

Package Dimensions

unit : mm
2018B



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
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		50	mA
Collector Current (Pulse)	I_{CP}		100	mA
Collector Dissipation	P_C		250	mW
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = 200V, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{CE} = 4V, I_C = 0$			0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = 6V, I_C = 0.1mA$	100*		320*	
	h_{FE2}	$V_{CE} = 6V, I_C = 1mA$	100			

Marking : QT

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* : The 2SC4412 is classified by 0.1mA h_{FE} as follows.

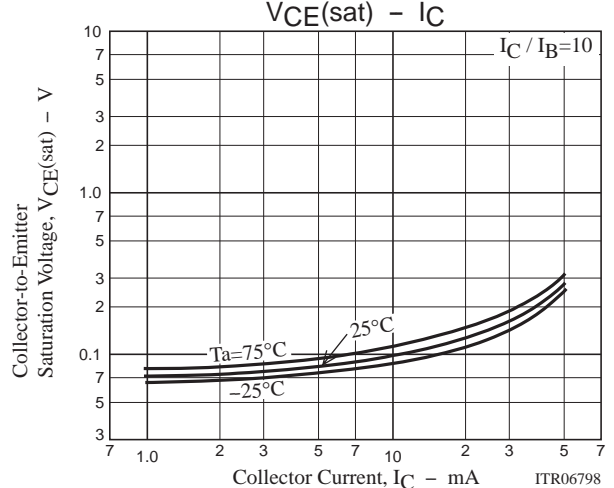
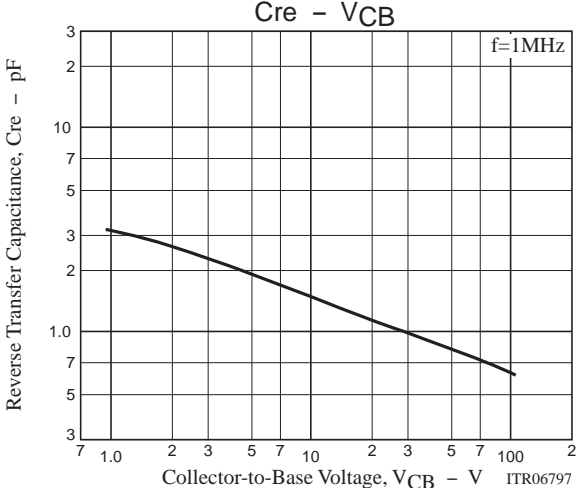
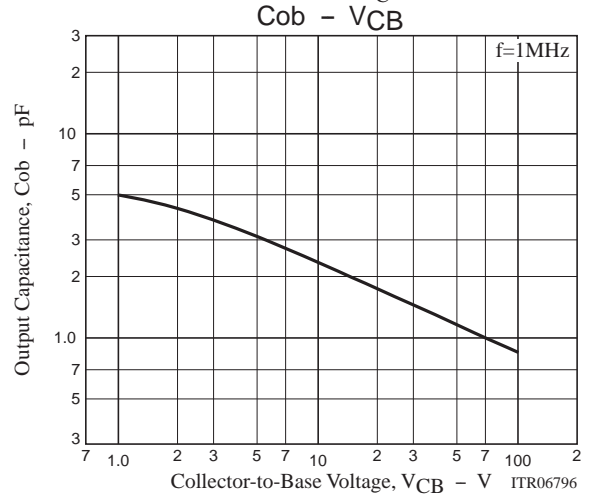
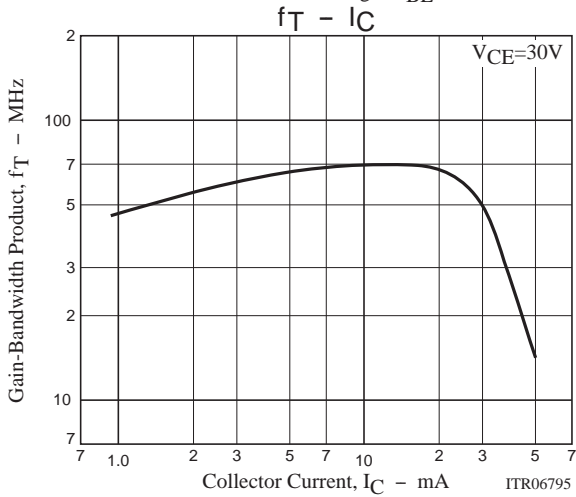
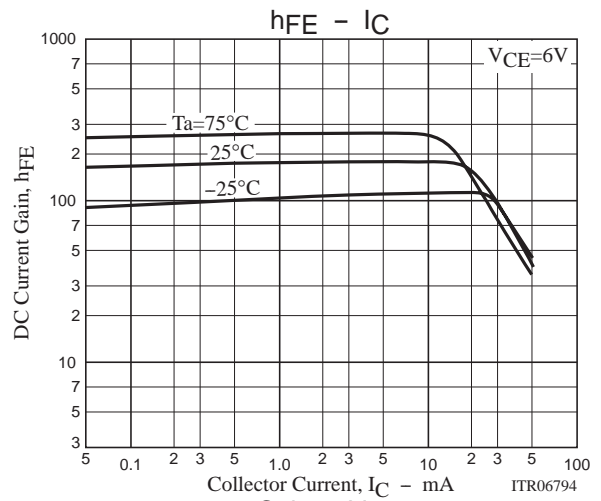
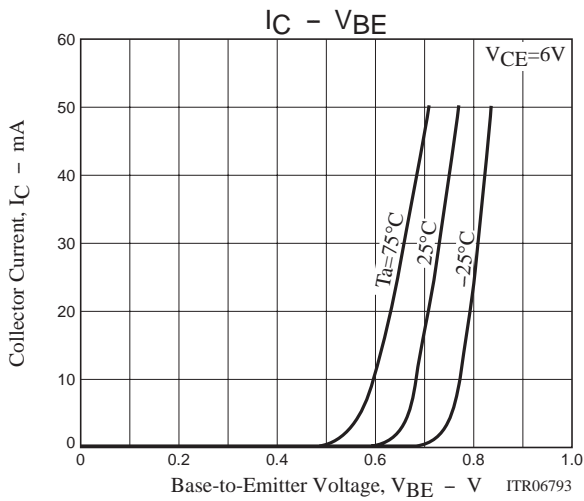
Rank	4	5
h_{FE}	100 to 200	160 to 320

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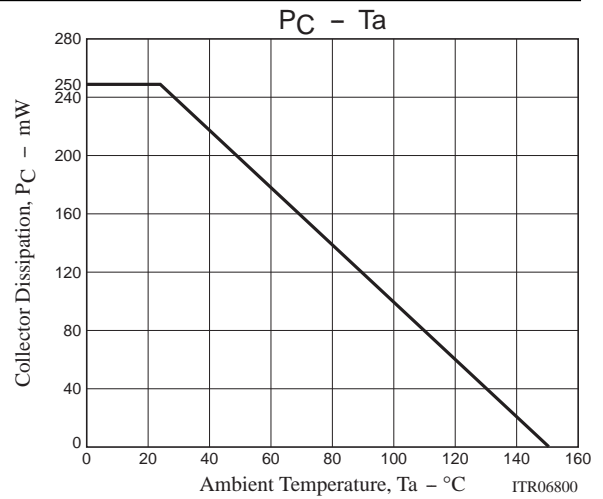
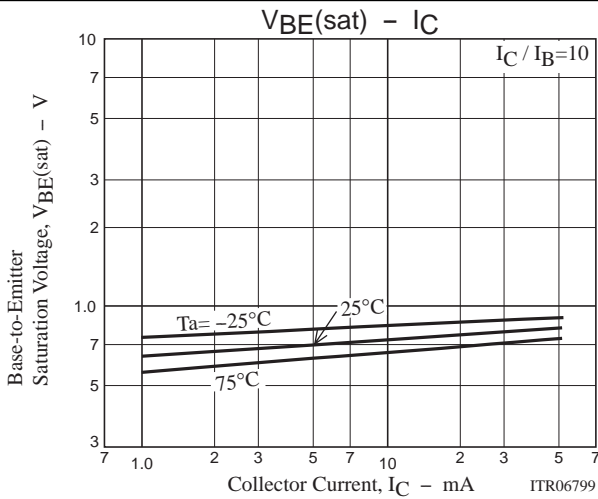
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	$V_{CE}=30V, I_C=10mA$		70		MHz
Output Capacitance	C_{ob}	$V_{CB}=30V, f=1MHz$		1.5		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=30V, f=1MHz$		1.0		pF
DC Current Gain Ratio	h_{FE} ratio	h_{FE1} / h_{FE2}		0.95		
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			1.0	V
Collector-to-Base Breakdown Voltage	$V(BR)CBO$	$I_C=10\mu A, I_E=0$	300			V
Collector-to-Emitter Breakdown Voltage	$V(BR)CEO$	$I_C=1mA, R_{BE}=\infty$	300			V
Emitter-to-Base Breakdown Voltage	$V(BR)EBO$	$I_C=10\mu A, I_C=0$	5			V



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