Ordering number: EN 3019

SANYO

No.3019

2SC4412

NPN Triple Diffused Planar Silicon Transistor

TV Camera Deflection, High-Voltage Driver Applications

Features

- High breakdown voltage ($V_{CEO} \geqq 300V$)
- 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

Absolute Maximum Ratings at Ta = 25°C

			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	Tj	150	°C
Storage Temperature	Tstg	−55 to +150	°C

Electrical Characteristics at Ta = 25°C

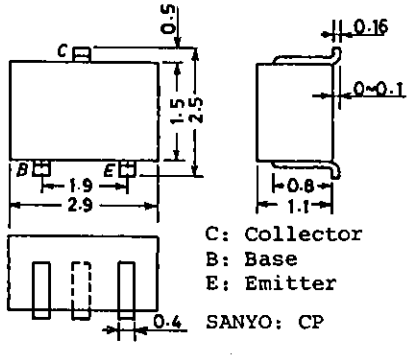
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=200V, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=6V, I_C=0.1mA$	100※		320※	
	$h_{FE}(2)$	$V_{CE}=6V, I_C=1mA$	100			
Gain-Bandwidth Product	f_T	$V_{CE}=30V, I_C=10mA$		70		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	300			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	300			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=\infty$	5			V
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	$h_{FE}(1)/h_{FE}(2)$		0.95		

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

100 4 200	160 5 320	

(Note) Marking : QT
h_{FE} rank : 4,5

Package Dimensions 2018A
(unit : mm)



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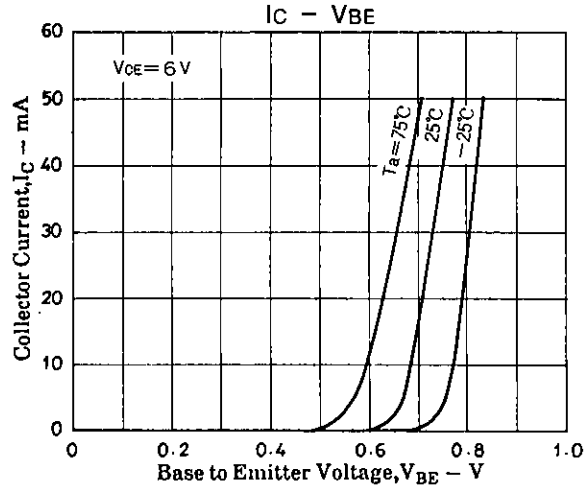
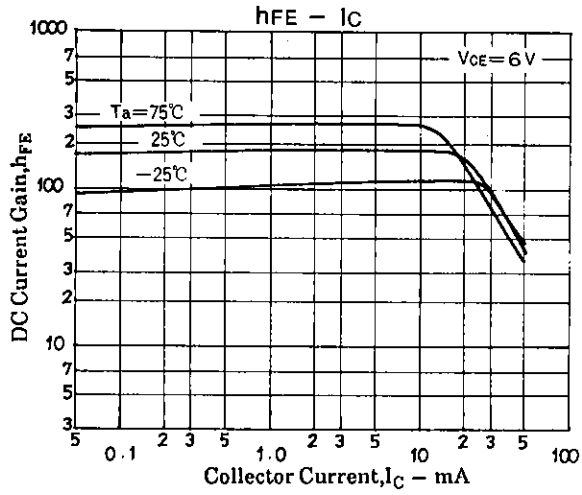
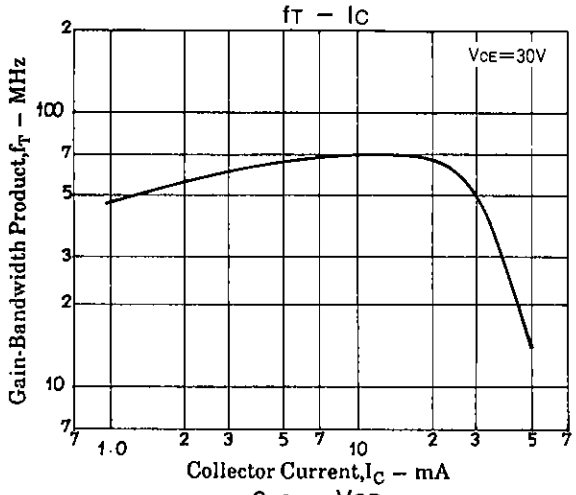
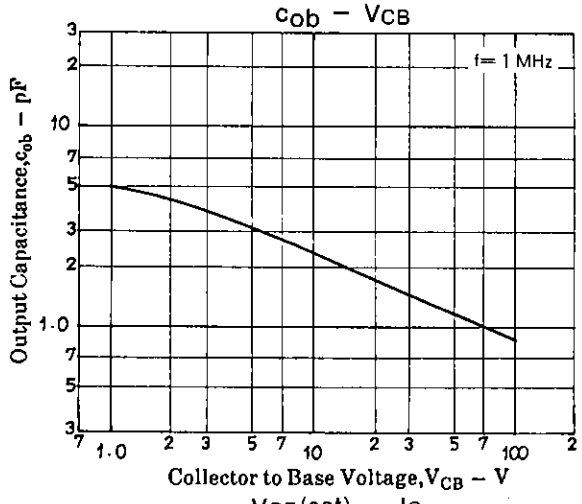
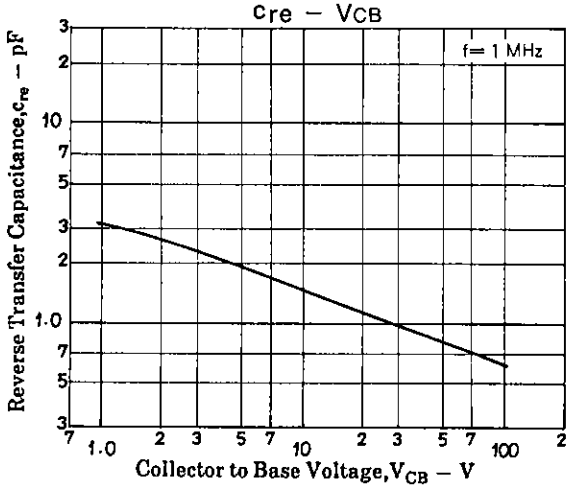
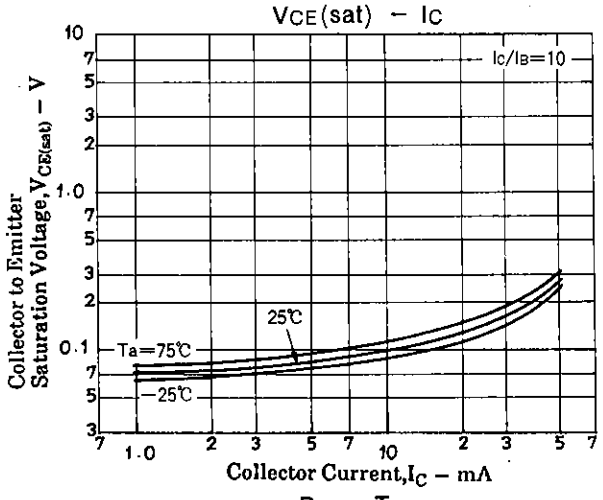

IC – VBE
VCE=6V
Ta=75℃
25℃
–25℃
Collector Current,IC – mA
Base to Emitter Voltage,VBE – V

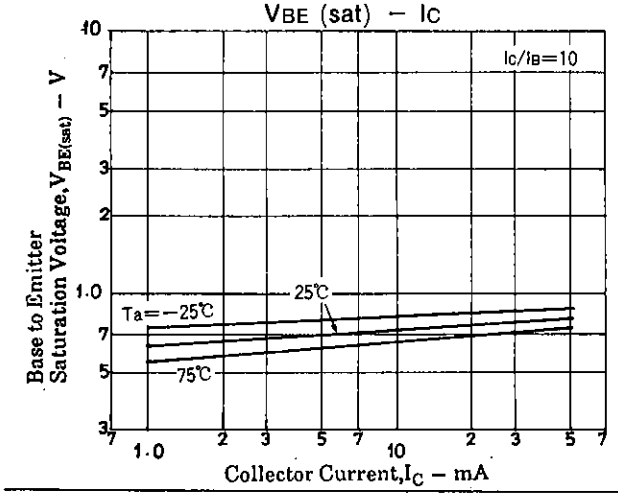

hFE – IC
VCE=6V
Ta=75℃
25℃
–25℃
DC Current Gain,hFE
Collector Current,IC – mA

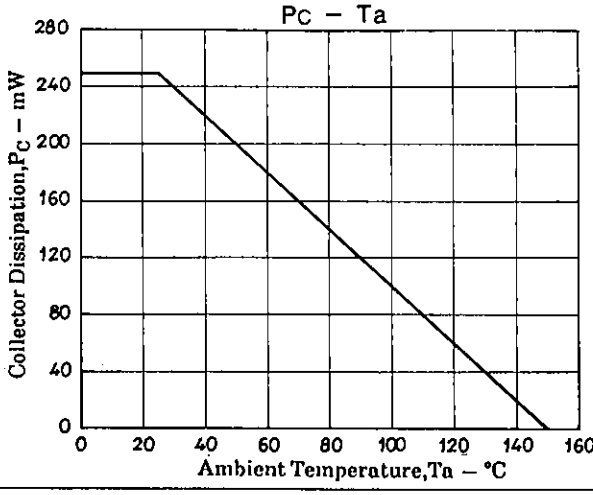

fT – IC
VCE=30V
Gain-Bandwidth Product,fT – MHz
Collector Current,IC – mA


Cob – VCB
f=1MHz
Output Capacitance,Cob – pF
Collector to Base Voltage,VCB – V


Cre – VCB
f=1MHz
Reverse Transfer Capacitance,Cre – pF
Collector to Base Voltage,VCB – V


VCE(sat) – IC
IC/IB=10
Collector to Emitter Saturation Voltage,VCE(sat) – V
25℃
Ta=75℃
–25℃
Collector Current,IC – mA


VBE (sat) – IC
IC/IB=10
Base to Emitter Saturation Voltage,VBE(sat) – V
Ta=–25℃
25℃
75℃
Collector Current,IC – mA


PC – Ta
Collector Dissipation,PC – mW
Ambient Temperature,Ta – °C