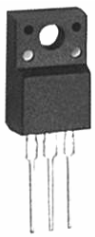
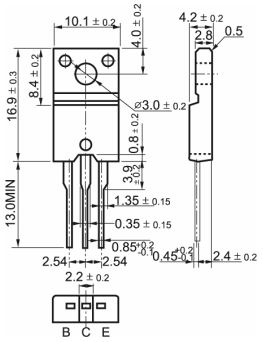
2SC4596E SILICON EPITAXIAL PLANNAR TRANSISTOR

GENERAL DESCRIPTION

High frequency, high power NPN transistors in a plastic envelope, primarily for use in audio and general purpose



TO-220F



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	V_{BE} = 0V	-	100	V
V_{CEO}	Collector-emitter voltage (open base)		-	60	V
I_C	Collector current (DC)		-	5	A
I_{CM}	Collector current peak value		-		A
P_{tot}	Total power dissipation	T_{mb}≤25℃	-	25	W
V_{CEsat}	Collector-emitter saturation voltage	I_C = 2A; I_B = 0.2A	-	1.5	V
V_{BE}	Emitter forward voltage	I_E = 2A		1.5	V
t_f	Fall time	I_C=2A,I_{B1}=-I_{B2}=0.2A,V_{CC}=30V		0.5	μ s

LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	V_{BE} = 0V	-	100	V
V_{CEO}	Collector-emitter voltage (open base)		-	60	V
V_{EBO}	Emitter-base oltage (open colloctor)			5	V
I_C	Collector current (DC)		-	5	A
I_B	Base current (DC)		-	1	A
P_{tot}	Total power dissipation	Tmb≤25℃	-	25	W
T_{stg}	Storage temperature		-55	150	℃
T_j	Junction temperature		-	150	℃

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{CBO}	Collector-base cut-off current	V_{CB}=100V		0.1	mA
I_{EBO}	Emitter-base cut-off current	V_{EB}=5V		0.1	mA
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=1mA	60		V
V_{CEsat}	Collector-emitter saturation voltages	I_C =2A; I_B = 0.2A		1.5	V
h_{FE}	DC current gain	I_C =1A; V_{CE} = 5V	100	200	
f_T	Transition frequency at f = 30MHz	I_C =0.5A; V_{CE} = 10V	120		MHz
C_c	Collector capacitance at f = 1MHz	V_{CB} = 10V		80	pF
t_{on}	On times	IC=2A,IB1=-IB2=0.2A,VCC=30V		0.5	us
t_s	Tum-off storage time	IC=2A,IB1=-IB2=0.2A,VCC=30V		1.5	us
t_f	Fall time	IC=2A,IB1=-IB2=0.2A,VCC=30V		0.5	us

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