2SD1996

Silicon NPN epitaxial planar type

For low-voltage output amplification

For muting

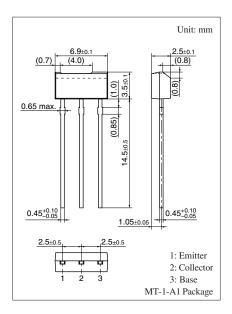
For DC-DC converter

Features

- \bullet Low collector-emitter saturation voltage $V_{\mbox{CE(sat)}}$
- Low ON resistance Ron
- \bullet High forward current transfer ratio h_{FE}
- Allowing supply with radial taping

Absolute Maximum Ratings $T_a = 25^{\circ}C$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	V _{CBO} 25		
Collector-emitter voltage (Base open)	V _{CEO}	20	V	
Emitter-base voltage (Collector open)	V _{EBO}	12	V	
Collector current	I _C	0.5	А	
Peak collector current	I _{CP}	1	А	
Collector power dissipation	P _C	600	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	



Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

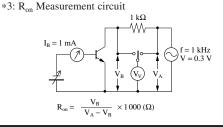
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$	25			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 1 {\rm mA}, I_{\rm B} = 0$	20			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_E = 10 \ \mu A, I_C = 0$	12			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 25 \text{ V}, I_E = 0$			0.1	μΑ
Forward current transfer ratio *1	h _{FE1} *2	$V_{CE} = 2 V, I_C = 500 mA$	200		800	
	h _{FE2}	$V_{CE} = 2 V, I_C = 1 A$	60			
Collector-emitter saturation voltage *1	V _{CE(sat)}	$I_{\rm C} = 500 \text{ mA}, I_{\rm B} = 20 \text{ mA}$		0.13	0.40	V
Base-emitter saturation voltage *1	V _{BE(sat)}	$I_{\rm C} = 500 \text{ mA}, I_{\rm B} = 50 \text{ mA}$			1.2	V
Transition frequency	f _T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		10		pF
(Common base, input open circuited)						
ON resistanse *3	R _{on}			1.0		Ω

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

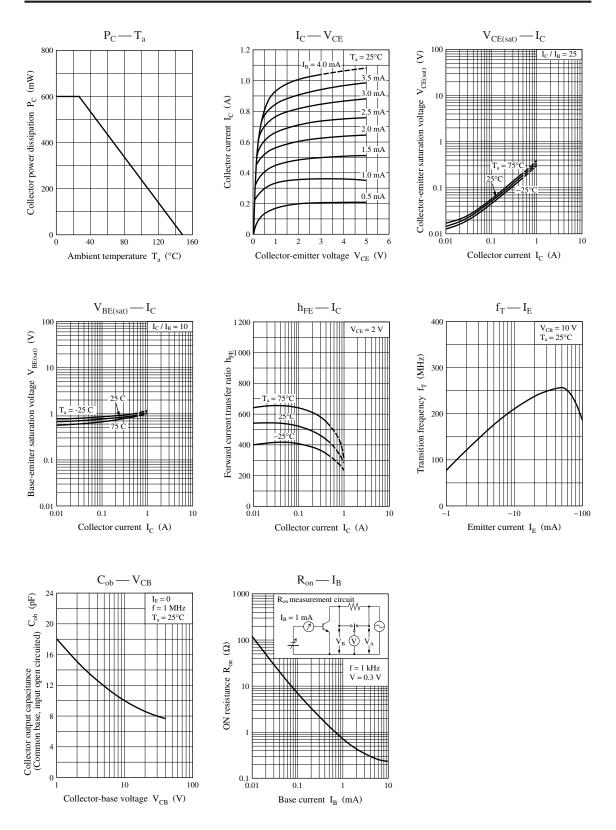
2. *1: Pulse measurement

*2: Rank classification

Rank	R	S	Т
$h_{\rm FE1}$	200 to 350	300 to 500	400 to 800



Panasonic



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