2SD1938(F)

Silicon NPN epitaxial planar type

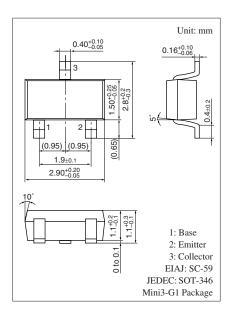
For low-voltage output amplification For muting For DC-DC converter

Features

- Low ON resistance Ron
- \bullet High forward current transfer ratio h_{FE}
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

0 "					
Parameter	Symbol	Rating	Unit		
Collector-base voltage (Emitter open)	V _{CBO}	50	V		
Collector-emitter voltage (Base open)	V _{CEO}	20	V		
Emitter-base voltage (Collector open)	V _{EBO}	25	V		
Collector current	I _C	300	mA		
Peak collector current	I _{CP}	500	mA		
Collector power dissipation	P _C	200	mW		
Junction temperature	Tj	150	°C		
Storage temperature	T _{stg}	-55 to +150	°C		





Marking symbol: 3W

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

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 1 {\rm mA}, I_{\rm B} = 0$	20			V
Base-emitter voltage	V _{BE}	$V_{CE} = 2 V, I_C = 4 mA$		0.6		V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 50 V, I_E = 0$			0.1	μΑ
Emitter-base cutoff current (Collector open)	I _{EBO}	$V_{EB} = 25 \text{ V}, I_C = 0$			0.1	μΑ
Forward current transfer ratio *1	h _{FE}	$V_{CE} = 2 V, I_C = 4 mA$	500		2 5 0 0	
Collector-emitter saturation voltage	V _{CE(sat)}	$I_{\rm C} = 30 \text{ mA}, I_{\rm B} = 3 \text{ mA}$			0.1	V
Transition frequency	f _T	$V_{CB} = 6 \text{ V}, I_E = -4 \text{ mA}, f = 200 \text{ MHz}$		80		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			7	pF
(Common base, input open circuited)						
ON resistance *2	R _{on}			1.0		Ω

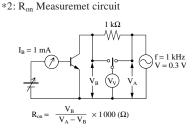
 Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

 2. *1: Rank classification

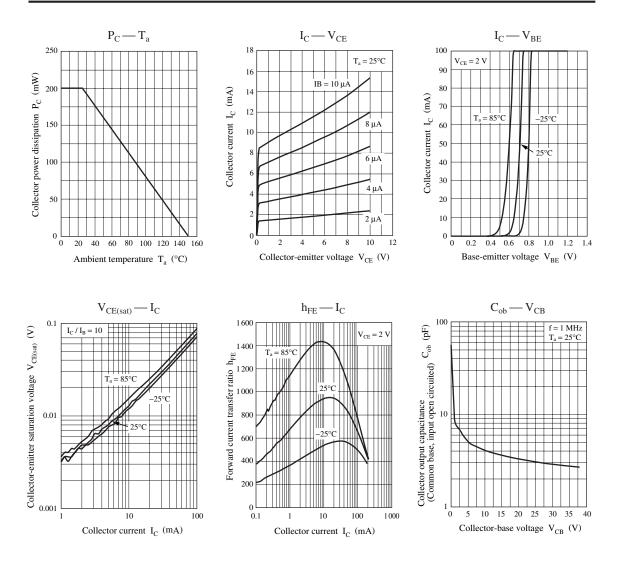
 *2: R_{on} Measuremet circuit

Rank	S	Т	No rank
h _{FE}	500 to 1 500	800 to 2500	500 to 2500

Product of no-rank classification is not marked.



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