

<b>SANYO</b>	No. 1207A	<b>2SC3277</b>
NPN Triple Diffused Planar Silicon Transistor FOR SWITCHING REGULATORS		

**Features**

- . High breakdown voltage, high current.
- . Wide ASO.
- . Fast switching speed.

**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	500	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	400	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	7	V
Collector Current	I <sub>C</sub>	10	A
Peak Collector	i <sub>cp</sub>	20	A
		PW ≤ 300μs, Duty Cycle ≤ 10%	
Collector Dissipation	P <sub>C</sub>	90	W
		Tc = 25°C	
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta=25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =400V, I <sub>E</sub> =0			10	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			10	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =5V, I <sub>C</sub> =1.2A	15*		50*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =5V, I <sub>C</sub> =6A	8			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.2A		20		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		120		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =6A, I <sub>B</sub> =1.2A			1.0	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =6A, I <sub>B</sub> =1.2A			1.5	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =1mA, I <sub>E</sub> =0	500			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =5mA, R <sub>BE</sub> =∞	400			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =1mA, I <sub>C</sub> =0	7			V
C-E Sustain Voltage	V <sub>CEO(sus)</sub>	I <sub>C</sub> =10A, I <sub>B</sub> =2A, L=50μH	400			V

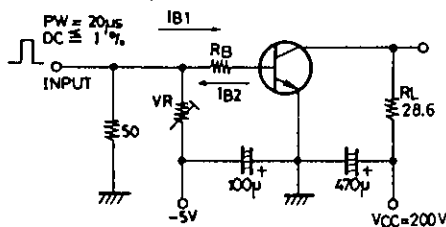
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\*: The h<sub>FE</sub>(1) of the 2SC3277 is classified as follows. When specifying the h<sub>FE</sub>(1) rank, specify two ranks or more in principle.

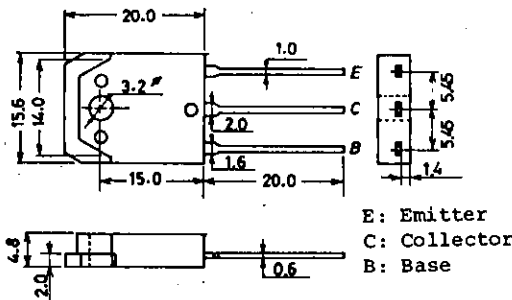
15 L	30	20 M	40	30 N	50
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**Package Dimensions 2022**  
(unit:mm)

**Switching Time Test Circuit**



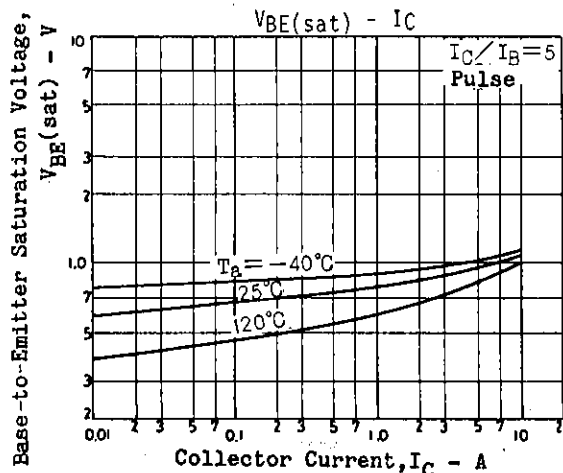
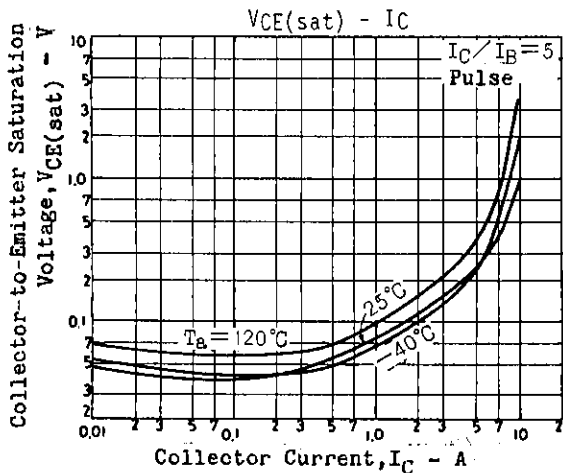
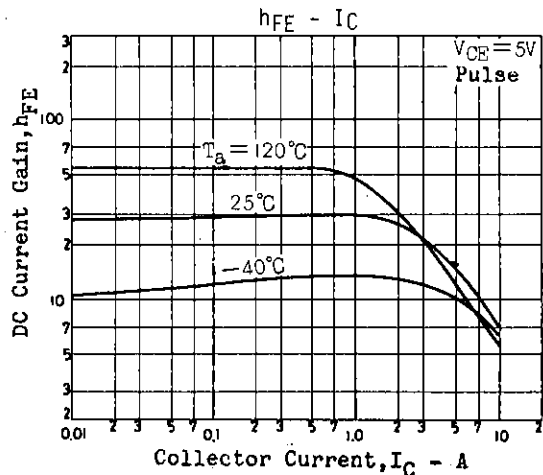
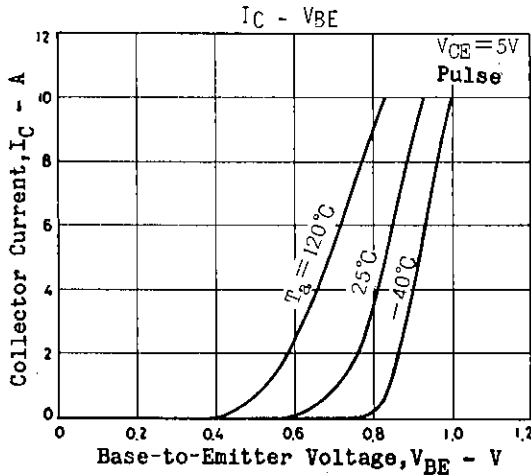
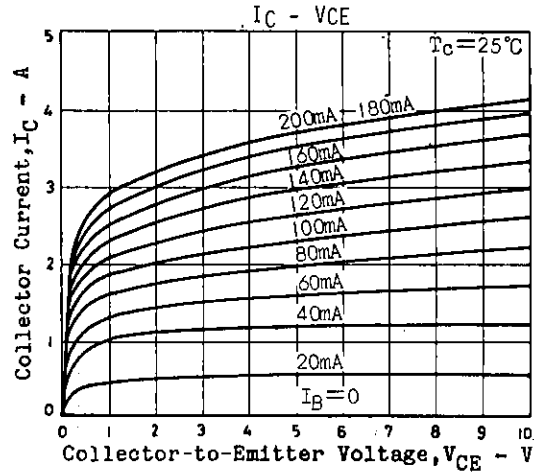
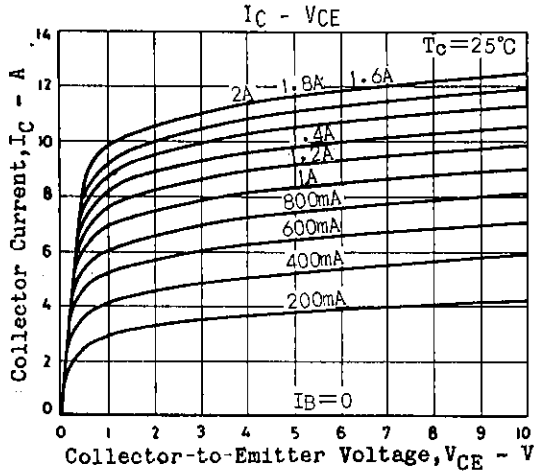
Unit (Resistance : Ω, Capacitance : F)

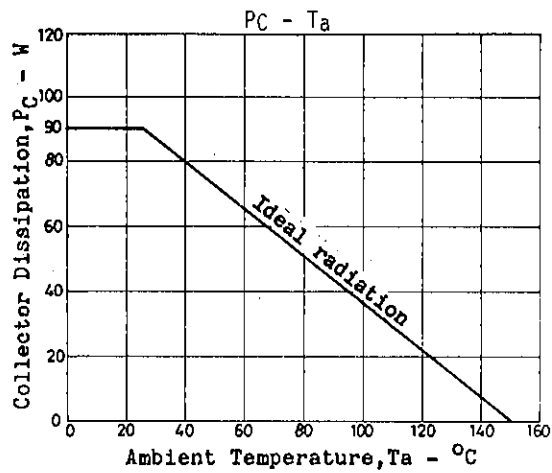
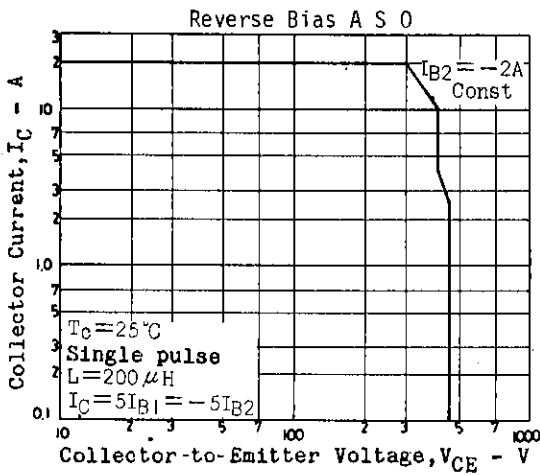
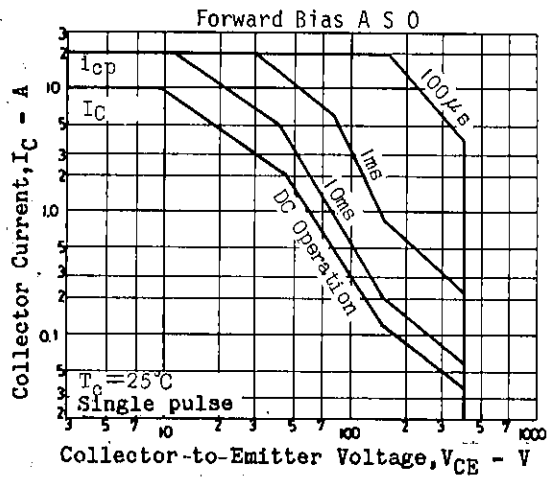
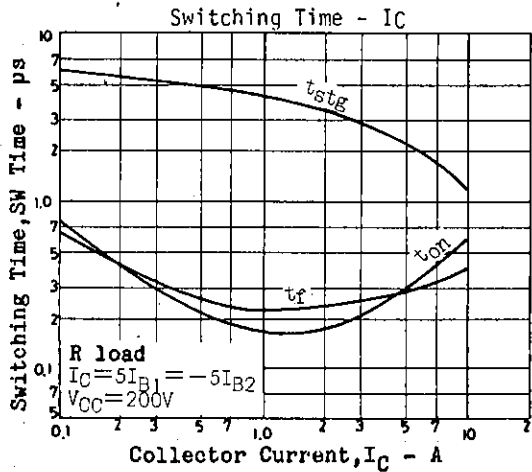


E: Emitter  
C: Collector  
B: Base

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			min	typ	max	unit
C-E Sustain Voltage	$V_{CEX(sus)}$ (1)	$I_C=10A, I_{B1}=2A, L=200\mu H,$ $I_{B2}=-2A, \text{clamped}$	400			V
C-E Sustain Voltage	$V_{CEX(sus)}$ (2)	$I_C=2.5A, I_{B1}=0.5A, L=200\mu H,$ $I_{B2}=-0.5A, \text{clamped}$	450			V
Turn-ON Time	$t_{on}$	$I_C=7A, I_{B1}=1.4A, I_{B2}=-1.4A,$ $R_L=28.6\text{ohms}, V_{CC}=200V$			1.0	$\mu s$
Storage Time	$t_{stg}$	" "			2.5	$\mu s$
Fall Time	$t_f$	" "			1.0	$\mu s$





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