

SANYO

No. 1207A

2SC3277

NPN Triple Diffused Planar Silicon Transistor
FOR SWITCHING REGULATORS

Features

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

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

			unit
Collector-to-Base Voltage	V_{CBO}	500	V
Collector-to-Emitter Voltage	V_{CEO}	400	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	10	A
Peak Collector	i_{cp}	20	A
		$PW \leq 300\mu s$, Duty Cycle $\leq 10\%$	
Collector Dissipation	P_C	90	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
		$T_c=25^\circ\text{C}$	

Electrical Characteristics at $T_a=25^\circ\text{C}$

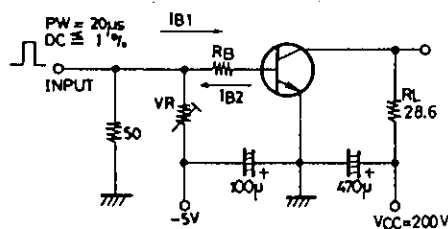
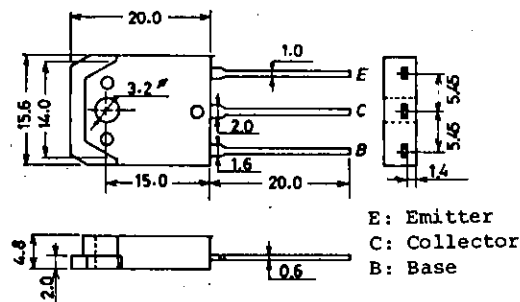
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=400V, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5V, I_C=1.2A$	15*		50*	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=6A$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=1.2A$		20		MHz
Output Capacitance	c_{ob}	$V_{CB}=10V, f=1\text{MHz}$		120		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=6A, I_B=1.2A$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=6A, I_B=1.2A$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	500			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V
C-E Sustain Voltage	$V_{CEO(sus)}$	$I_C=10A, I_B=2A, L=50\mu H$	400			V

Continued on next page.

*: The $h_{FE}(1)$ of the 2SC3277 is classified as follows. When specifying the $h_{FE}(1)$ rank, specify two ranks or more in principle.

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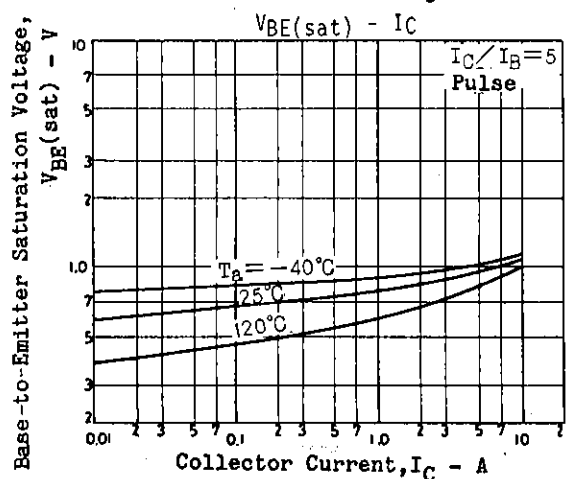
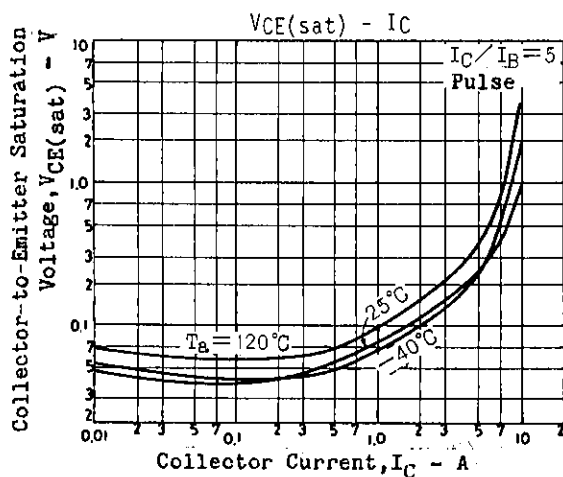
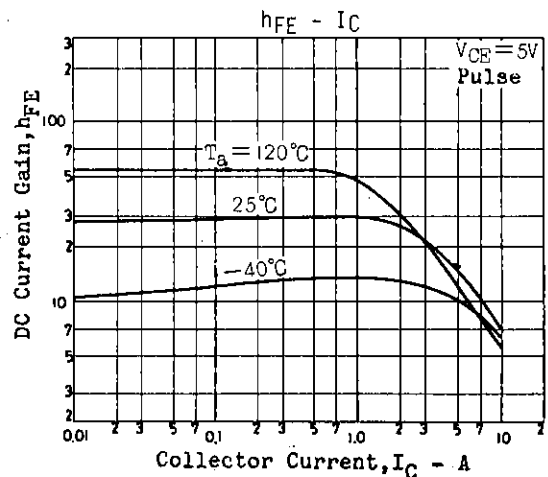
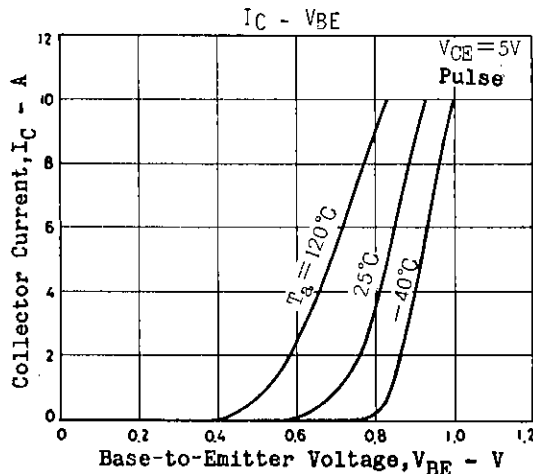
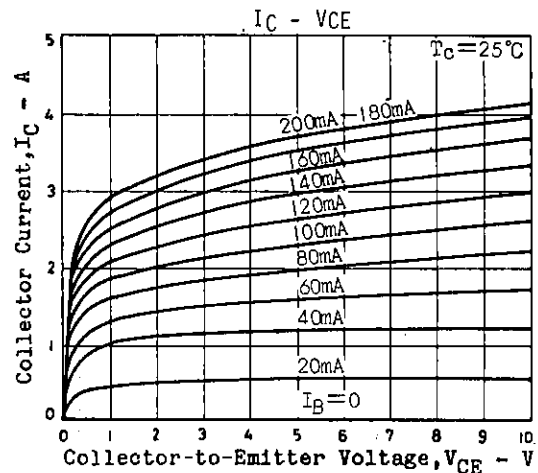
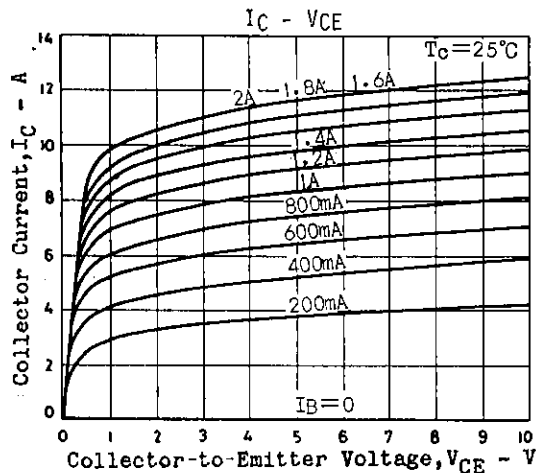
Package Dimensions 2022
(unit:mm)

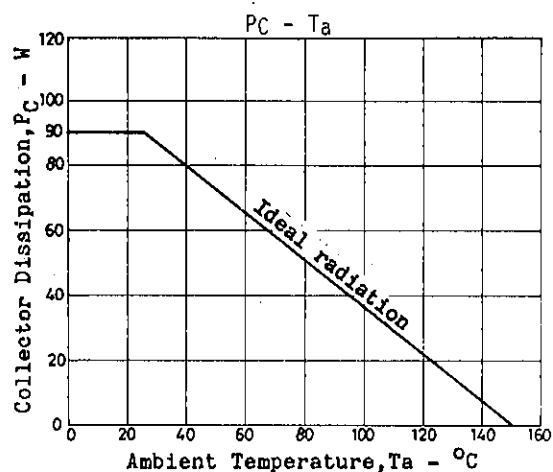
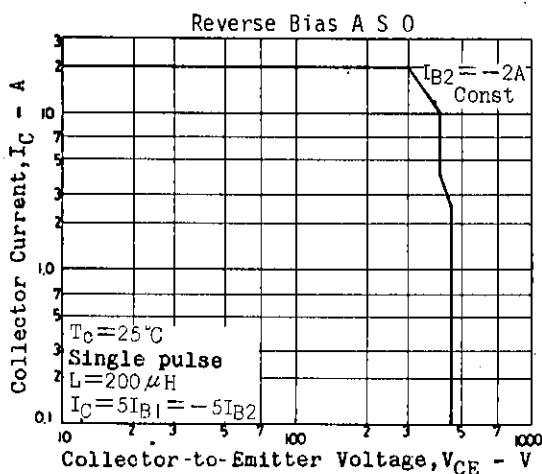
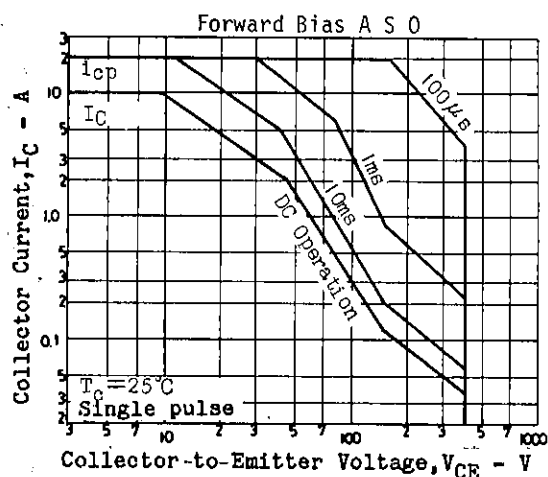
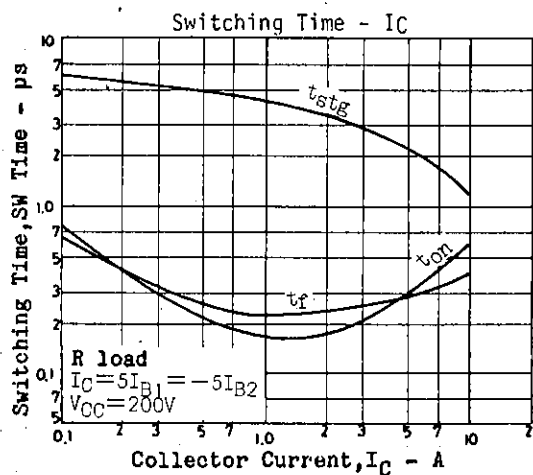
Switching Time Test CircuitUnit (Resistance : Ω , Capacitance : F)

E: Emitter
C: Collector
B: Base

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





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