

Ordering number: EN 1580C

SANYO

No. 1580C

2SC3457

NPN Triple Diffused planar Type Silicon Transistor
FOR SWITCHING REGULATORS

Features

- High breakdown voltage and high reliability.
- Fast switching speed (t_f : 0.1 μ s typ).
- Wide ASO.
- Adoption of MBIT process.

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

			unit
Collector-to-Base Voltage	V_{CB0}	1100	V
Collector-to-Emitter Voltage	V_{CEO}	800	V
Emitter-to-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	3	A
Peak Collector Current	i_{cp}	$PW \leq 300\mu s, \text{Duty Cycle} \leq 10\%$	10 A
Base Current	I_B	1.5	A
Collector Dissipation	P_C	$T_c=25^\circ\text{C}$	50 W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

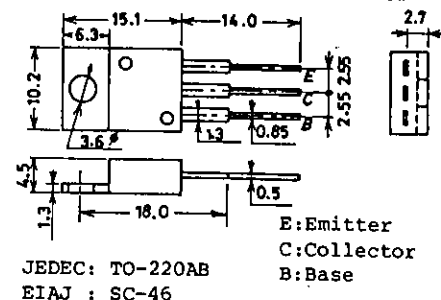
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=800\text{V}, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=0.2\text{A}$	10*		40*	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=1\text{A}$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=0.2\text{A}$		15		MHz
Output Capacitance	c_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		60		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.5\text{A}, I_B=0.3\text{A}$			2.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.5\text{A}, I_B=0.3\text{A}$			1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	1100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5\text{mA}, R_{BE}=\infty$	800			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	7			V

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*: The $h_{FE(1)}$ of the 2SC3457 is classified as follows. When specifying the $h_{FE(1)}$ rank, specify two ranks or more in principle.

10	K	20	15	L	30	20	M	40
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Package Dimensions 2010A
(unit:mm)

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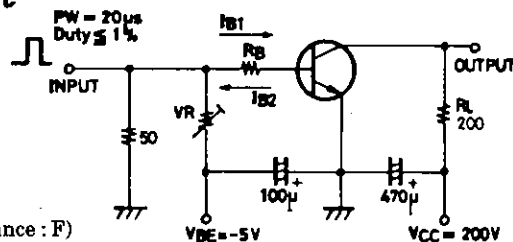
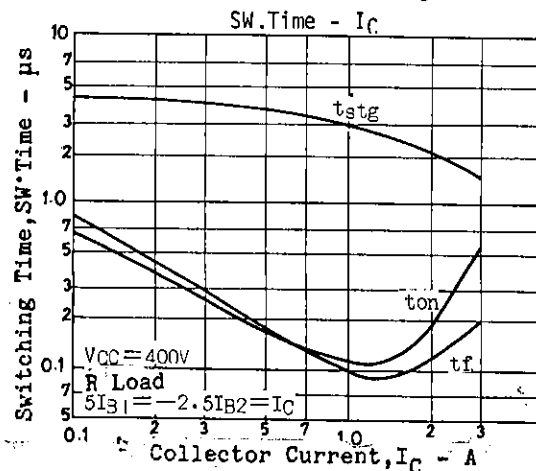
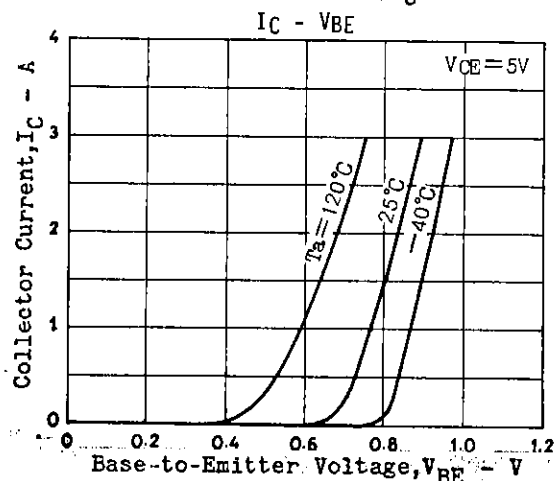
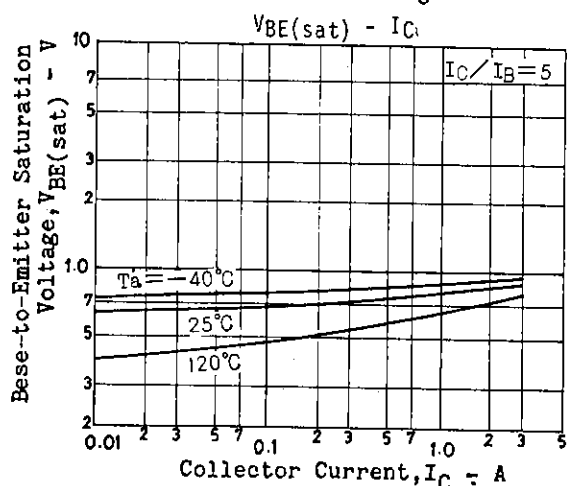
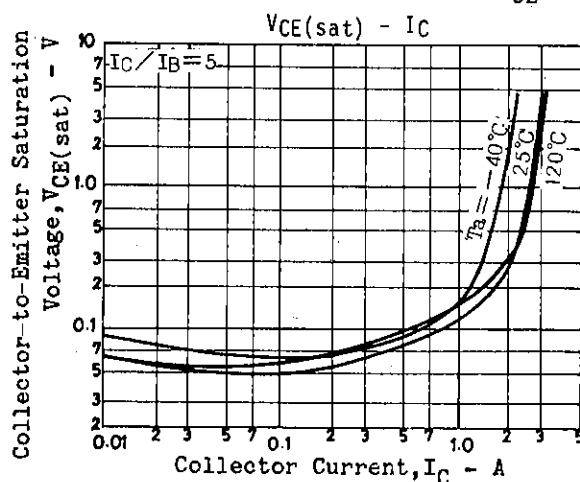
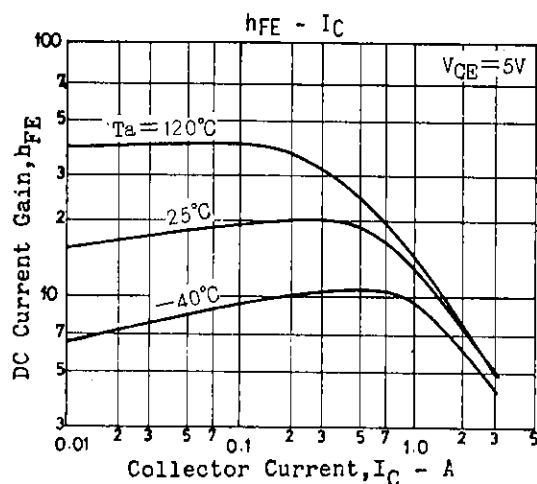
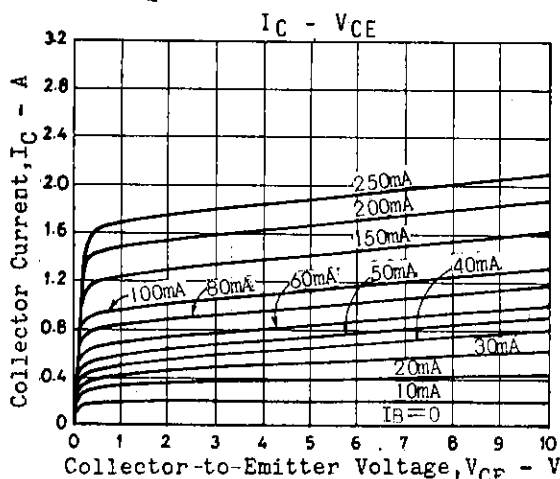
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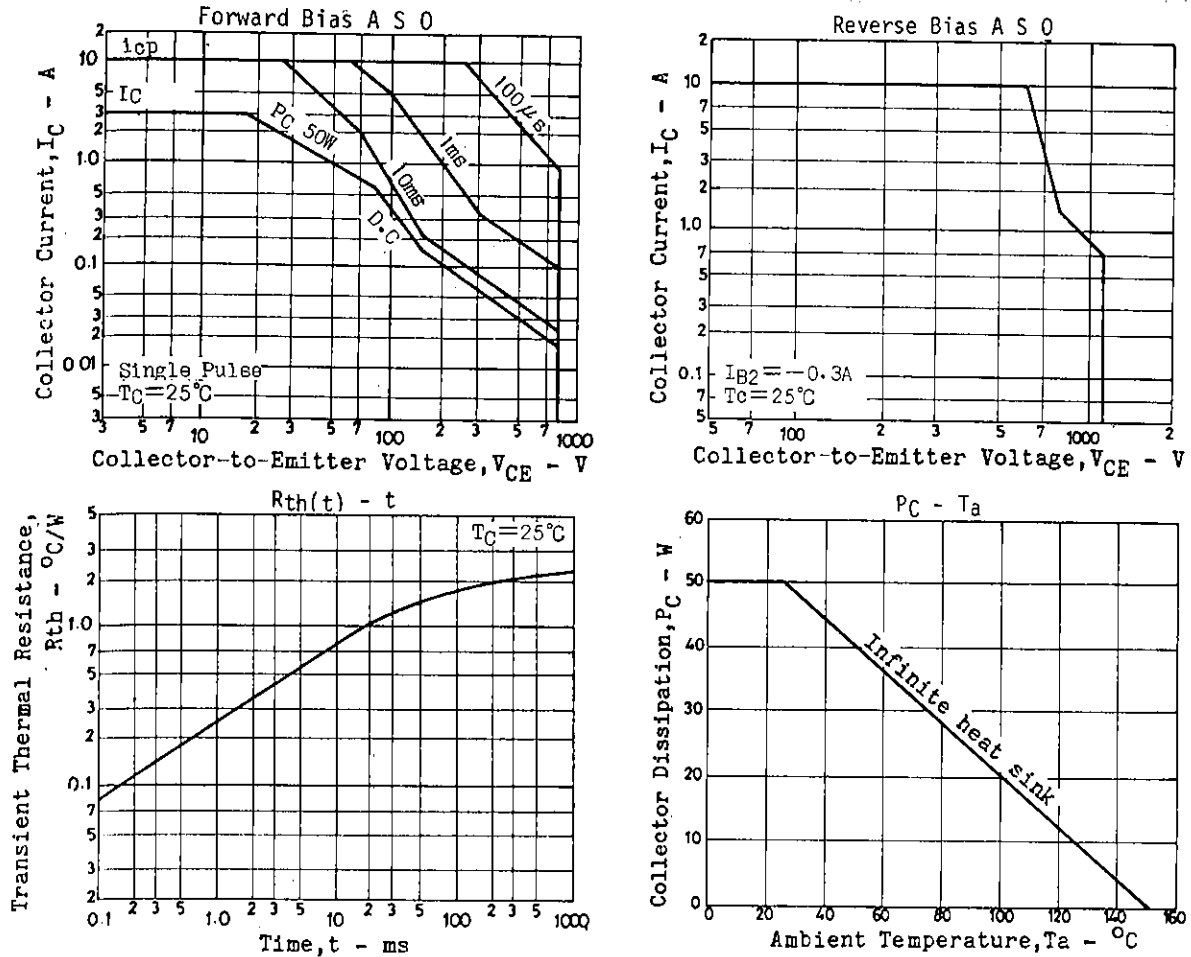
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			min	typ	max	unit
Collector-to-Emitter Sustain Voltage	$V_{CEX(sus)}$	$I_C = 1.5A$ $I_{B1} = -I_{B2} = 0.3A$ $L = 2mH, \text{clamped}$	800			V
Turn-on Time	t_{on}	$V_{CC} = 400V$ $5I_{B1} = -2.5I_{B2} = I_C = 2A$ $R_L = 200\Omega$		0.5		μs
Fall Time	t_{stg}			3.0		μs
Storage Time	t_f			0.3		μs

Switching Time Test Circuit

Unit (Resistance : Ω , Capacitance : F)

2SC3457



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