

SANYO

No.1579D

2SC3456

NPN Triple Diffused Planar Silicon Transistor

800V/1.5A Switching Regulator Applications**Features**

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

Absolute Maximum Ratings at Ta=25°C

Collector-to-Base Voltage	V_{CBO}	1100	V	
Collector-to-Emitter Voltage	V_{CEO}	800	V	
Emitter-to-Base Voltage	V_{EBO}	7	V	
Collector Current	I_C	1.5	A	
Collector Current (Pulse)	I_{CP}	$PW \leq 300\mu s, \text{Duty Cycle} \leq 10\%$	5	A
Base Current	I_B	0.8	A	
Collector Dissipation	P_C	$T_c = 25^\circ C$	40	W
Junction Temperature	T_j	150	$^\circ C$	
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$	

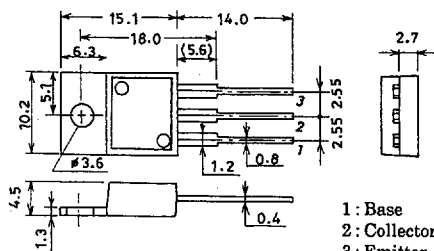
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			10	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.1A$	10*		40*	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=0.5A$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.1A$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		35		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.75A, I_B=0.15A$			2.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.75A, I_B=0.15A$			1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	1100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	800			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	7			V

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*: The $h_{FE(1)}$ of the 2SC3456 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 2010C
(unit:mm)JEDEC: TO220AB
EIAJ: SC46**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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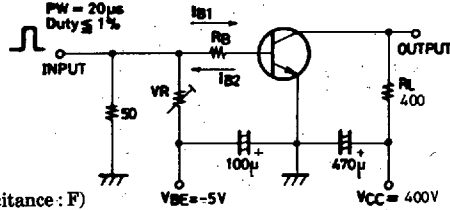
4227KI/N295MW/3085KI/D134MY, TS No.1579-1/3

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			min	typ	max	unit
Collector-to-Emitter Sustain Voltage	$V_{CEX(sus)}$	$I_C=0.75A$ $I_{B1}=-I_{B2}=0.15A$ $L=5mH$, clamped	800			V
Turn-on Time	t_{on}	$V_{CC}=400V$ $5I_{B1}=-2.5I_{B2}=I_C=1A$ $R_L=400\Omega$			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)