NPN Triple Diffused Planar Silicon Transistor



2SC3460

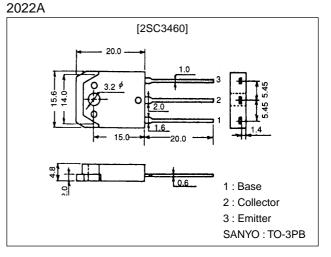
800V/6A Switching Regulator Applications

Features

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

Package Dimensions

unit:mm



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		1100	V
Collector-to-Emitter Voltage	VCEO		800	V
Emitter-to-Base Voltage	VEBO		7	V
Collector Current	IC		6	A
Collector Current (Pulse)	ICP	PW≤300µs, Duty Cycle≤10%	20	A
Base Current	Ι _Β		3	Α
Collector Dissipation	PC	Tc=25°C	100	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =800V, I _E =0			10	μA
Emitter Cutoff Current	IEBO	$V_{EB}=5V, I_{C}=0$			10	μA
DC Current Gain	hFE1	$V_{CE}=5V, I_{C}=0.4A$	10*		40*	
	h _{FE} 2	$V_{CE}=5V, I_{C}=2A$	8			
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =0.4A		15		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		120		pF

* : The h_{FE1} of the 2SC3460 is classified as follows. When specifying the h_{FE1} rank, specify two ranks or more in principle.

10 K 20 15 L 30 20 M 40

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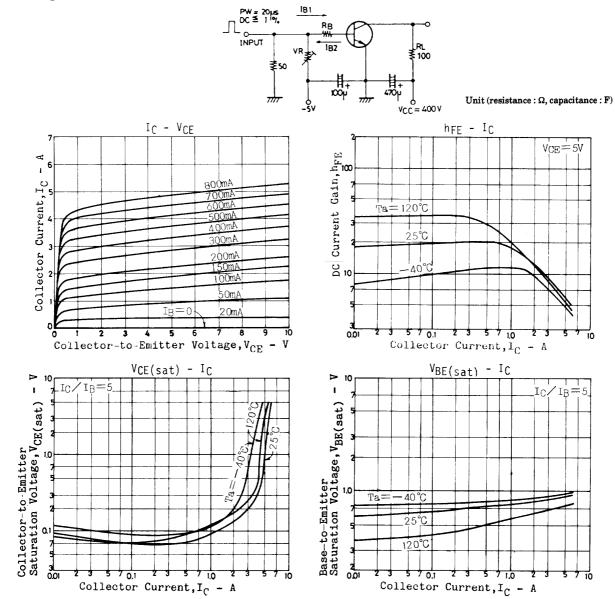
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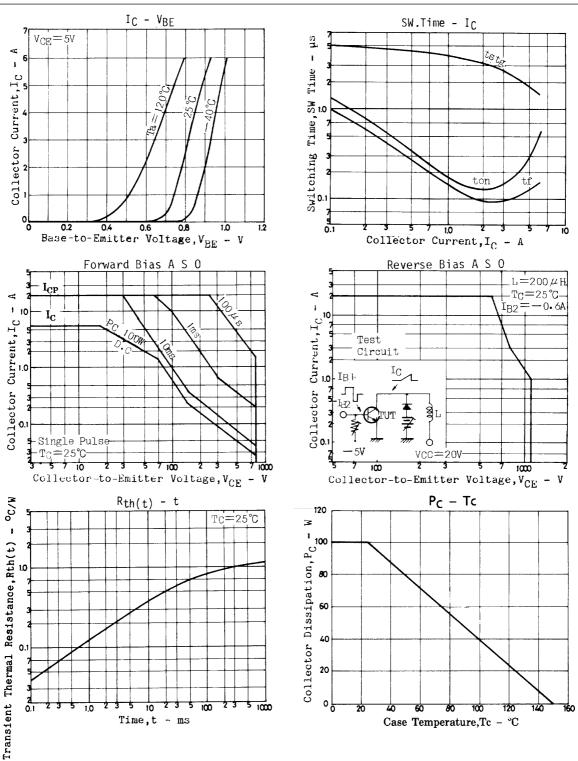
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =3A, I _B =0.6A			2.0	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =3A, I _B =0.6A			1.5	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =1mA, I _E =0	1100			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =5mA, R _{BE} =∞	800			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE=1mA, IC=0	7			V
Collector-to-Emitter Sustain Voltage	VCEX(sus)	I _C =3A, I _{B1} =-I _{B2} =0.6A, L=1mH, clamped	800			V
Turn-ON Time	ton	V_{CC} =400V, 5I _{B1} =-2.5I _{B2} =I _C =4A, R _L =100 Ω			0.5	μs
Storage Time	^t stg	V_{CC} =400V, 5I _{B1} =-2.5I _{B2} =I _C =4A, R _L =100 Ω			3.0	μs
Fall Time	t _f	V_{CC} =400V, 5I _{B1} =-2.5I _{B2} =I _C =4A, R _L =100 Ω			0.3	μs

Switching Time Test Circuit





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