



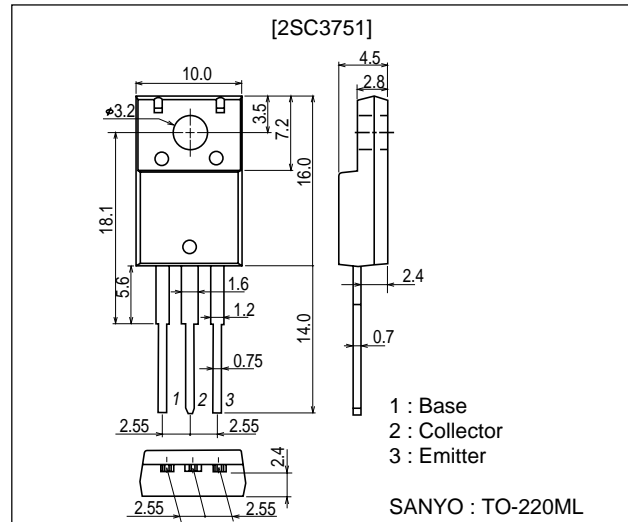
800V / 1.5A Switching Regulator Applications

Features

- High breakdown voltage and high reliability.
- Fast switching speed.
- Wide ASO.
- Adoption of MBIT process.
- Micaless package facilitating mounting.

Package Dimensions

unit : mm
2041A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	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		1.5	A
Collector Current (Pulse)	I _{CP}	PW≤300μs, Duty Cycle≤10%	5	A
Base Current	I _B		0.8	A
Collector Dissipation	P _C	T _c =25°C	25	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =800V, I _E =0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			10	μA

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■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

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2SC3751

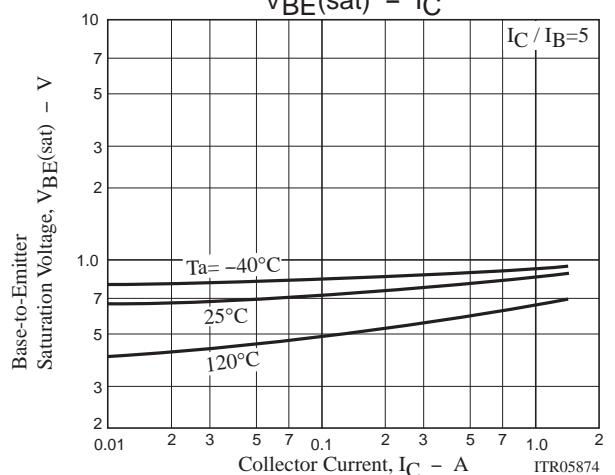
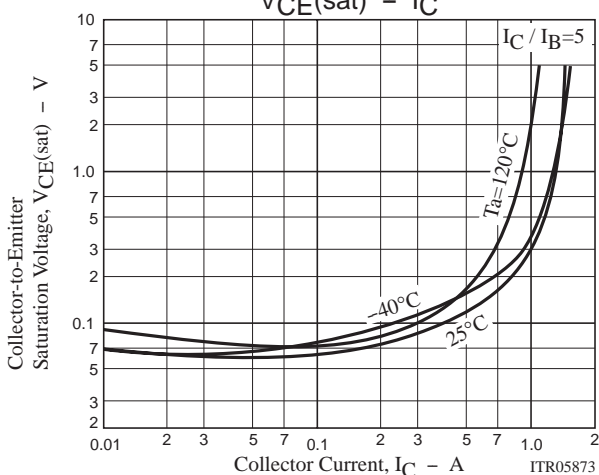
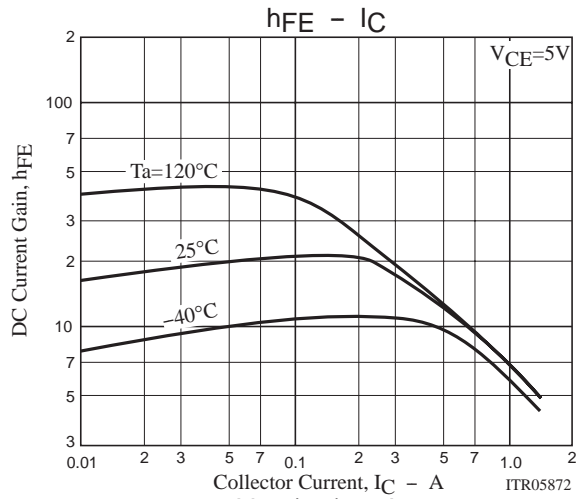
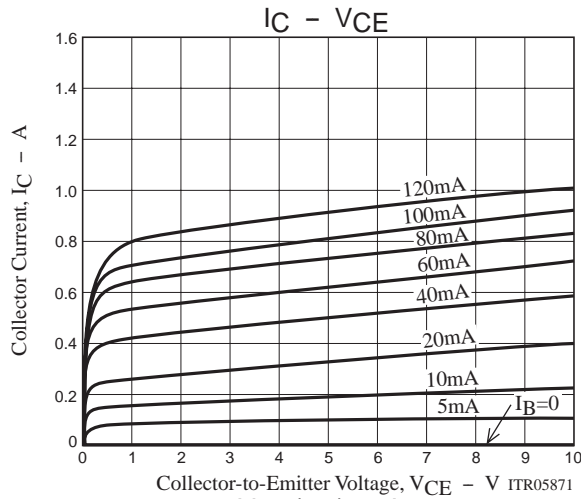
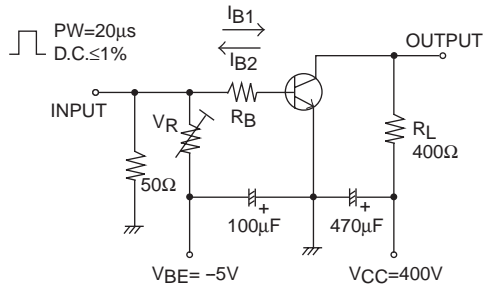
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=0.1A$	10*		40*	
	h_{FE2}	$V_{CE}=5V, I_C=0.5A$	8			
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=0.1A$		15		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		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
Collector-to-Emitter Sustain Voltage	$V_{CEX(sus)}$	$I_C=0.75A, I_{B1}=-I_{B2}=0.15A, L=5mH, \text{clamped}$	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
Storage Time	t_{stg}	$V_{CC}=400V, 5I_{B1}=-2.5I_{B2}=I_C=1A, R_L=400\Omega$			3.0	μs
Fall Time	t_f	$V_{CC}=400V, 5I_{B1}=-2.5I_{B2}=I_C=1A, R_L=400\Omega$			0.3	μs

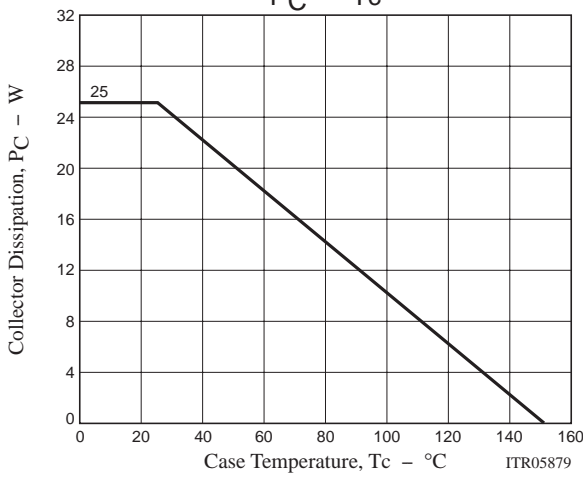
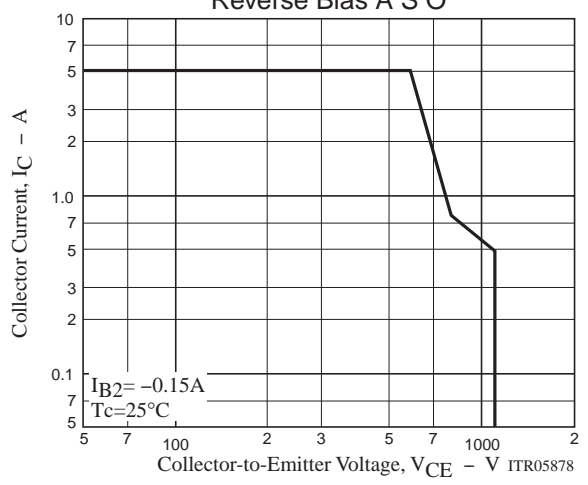
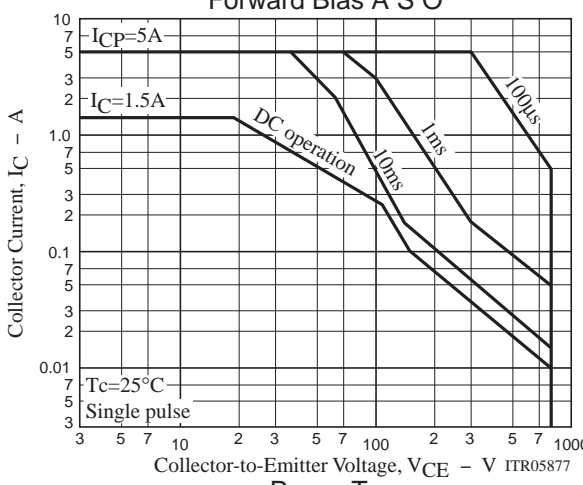
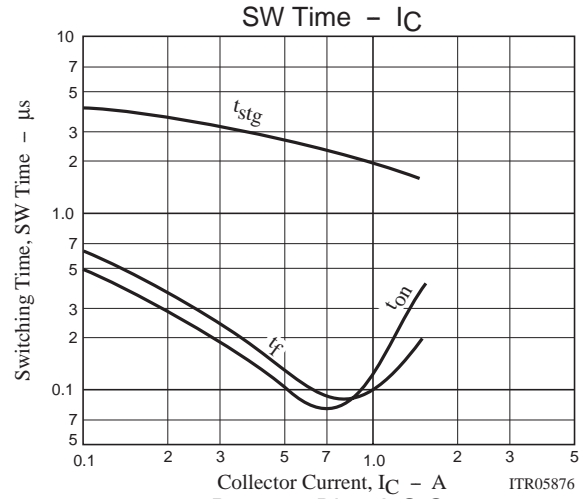
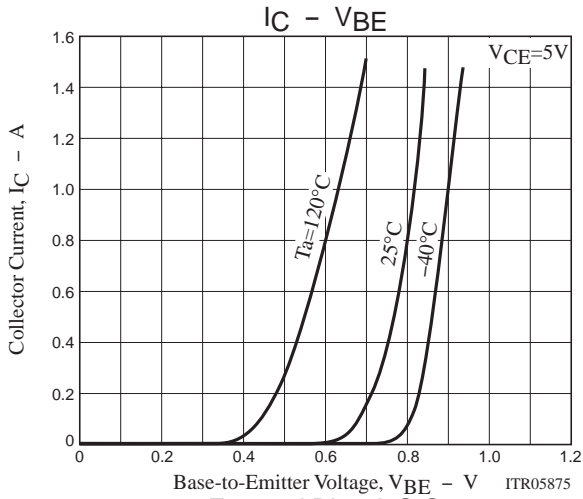
* : The h_{FE1} of the 2SC3751 is classified as follows. When specifying the h_{FE1} rank, specify two ranks or more in principle.

Rank	K	L	M
h_{FE}	10 to 20	15 to 30	20 to 40

Switching Time Test Circuit



2SC3751



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