

SHINDENGEN

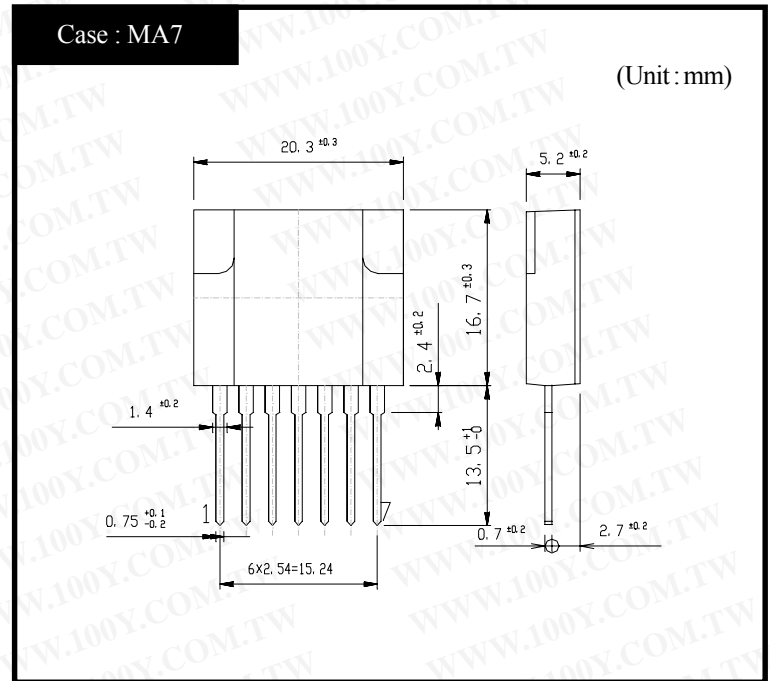
Power Switching Regulators

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
 Http://www.100y.com.tw

MA3000 Series

MA3830

OUTLINE DIMENSIONS



RATINGS

●Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-30~125	°C
Operating Temperature	Top		-20~125	°C
Junction Temperature	Tj		150	°C
Peak Input Voltage	Vin	②+,④-,Fig.1 is Measurement Circuit of Peak Input Voltage Vin and Collector Cutoff Current I _{CEX} .	850	V
Input Current	Iin	DC ②+,④-	6	A
		Pulse ②+,④- Pulse Width 150 μs MAX, Duty 1/2, Sawtooth Wave, Peak Value.	12	A
Maximum Power Dissipation	P _D	Ta=25°C	3	W
		Heatsink Tc=100°C	22	W
Dielectric Strength	Vdis	Terminals To Case AC 1 min	2	kV
Insulation Resistance		Terminals To Case 500VDC	100	MΩ
Max Voltage ④ to ⑦	V④•⑦	④+,⑦-	6	V
Max Current ⑥ to ④	I⑥•④	⑥+,④- (Peak) Duty Max 3/5	100	mA
Max Current ⑤ to ④	I⑤•④	⑤+,④- (Q ₂ Collector Current)	500	mA

●Electrical Characteristics (Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit	
Q1	Collector Cutoff Current	I _{CEX}	V _{CE} =850V, Fig.1 is Measurement Circuit of Peak Input Voltage Vin and Collector Cutoff Current I _{CEX} , ②+,④-	MAX 100	μA
	DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 3.0A, ②+,④-,⑤I _B	11~22	
	Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =3.0A, I _B =0.6A, ②+,④-,⑤I _B	MAX 1.0	V
	Driving Saturation Voltage	V _{D(sat)}	I _C =1.5A, I _B =0.3A, ②+,④-,⑤I _B	MIN 1.7	V
				MAX 2.3	V
Thermal Resistance	θ _{jc}	Junction to Case	MAX 2.2	°C/W	

●Standard Operating Condition*Design Standard For Application Circuit

Item	Conditions	Ratings	Unit
Input Rated Voltage		AC175~276	V
Output Nominal Wattage		100	W
Output Nominal Voltage		24	V
Output Nominal Current		4.2	A

●Standard Operating Condition*Standard Operating Characteristics (Ta=25°C)

Item	Conditions	Ratings	Unit	
AC Input Voltage	$I_o=4.2A, 20.5V \leq V_o \leq 24.6V$	MAX 175	V	
Minimum Input Full Load Output Voltage	$V_{in}=180V, I_o=4.2A$	24.0 ± 0.6	V	Fig 2, ① Refer
Maximum Input Light Load Output Voltage	$V_{in}=276V, I_o=0.0A$	24.0 ± 0.6	V	Fig 2, ② Refer
Over Current Protection	Foldback Current	$V_{in}=276V, V_o=20V$	MAX 6.0	Fig 2, ③ Refer
	Short Circuit	$V_{in}=276V, R_o=0.5 \Omega$	Nodamage To Any Device, Automatic Recovery.	Fig 2, ④ Refer

Figure in ○=Terminal Sign

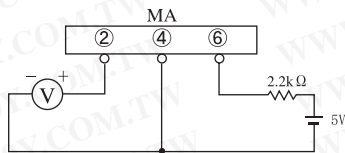


Fig1. Measurement Circuit

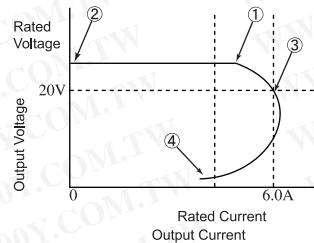
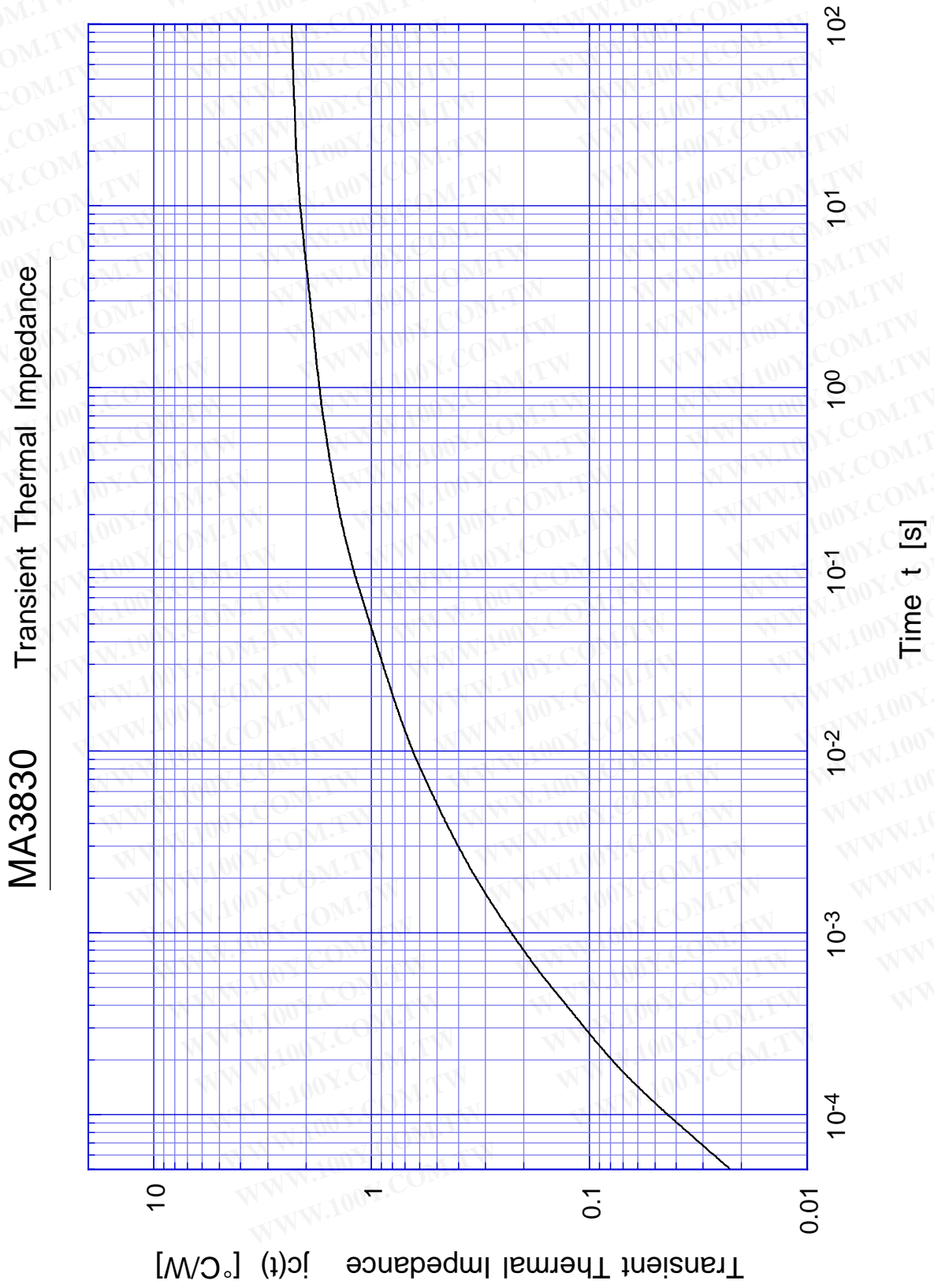


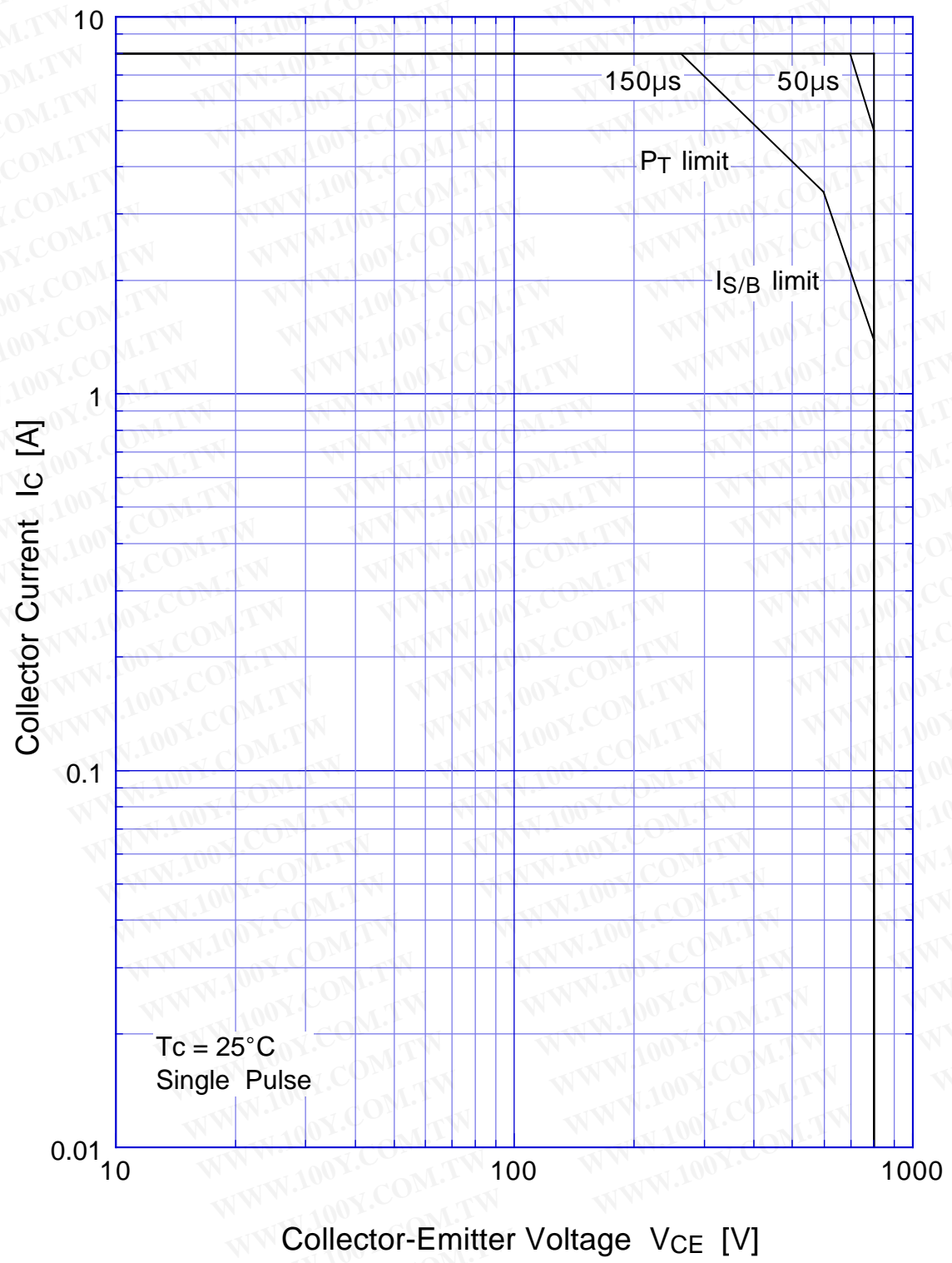
Fig2. Output Voltage/Current

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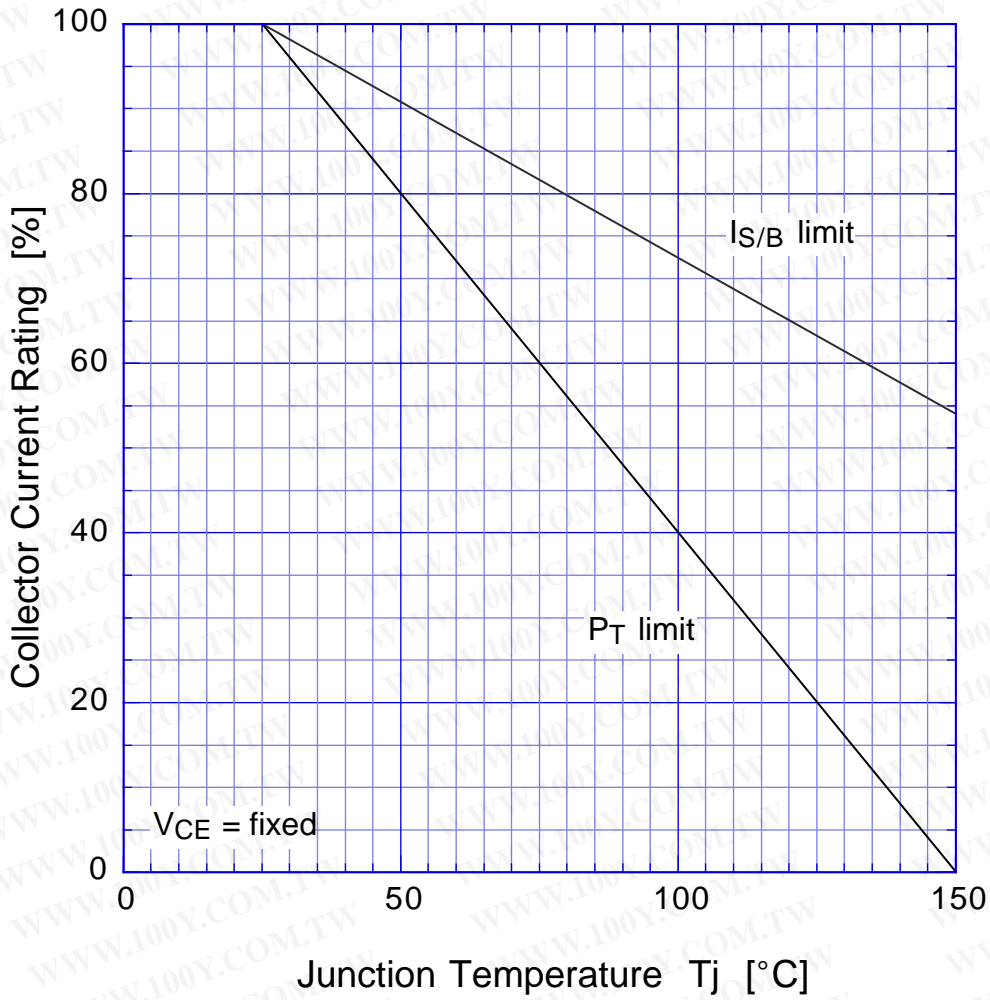
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MA3830 Forward Bias SOA



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MA3830 Collector Current Derating



MA3830 Reverse Bias SOA



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