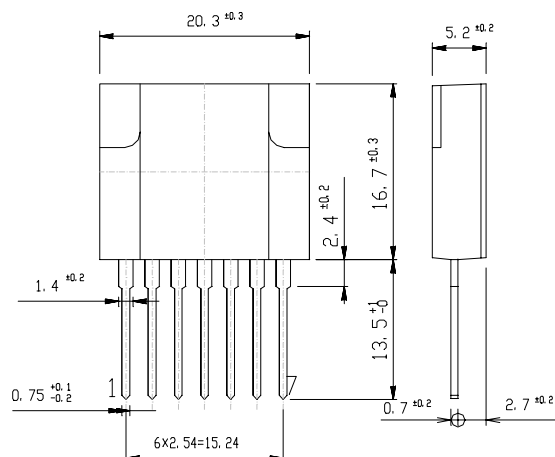


MA3450

OUTLINE DIMENSIONS

Case : MA7

Unit : mm



RATINGS

●Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-30~125	°C
Operating Temperature	T _{op}		-20~125	°C
Junction Temperature	T _j		150	°C
Peak Input Voltage	V _{in}	②+,④-,Fig.1 is Measurement Circuit of Peak Input Voltage V _{in} and Collector Cutoff Current I _{CEX} .	500	V
Input Current	I _{in}	DC ②+,④-	10	A
Maximum Power Dissipation	P _D	Pulse ②+,④- Pulse Width 150 μs MAX, Duty 1/2, Sawtooth Wave, Peak Value.	20	A
	P _D	T _a =25°C	3	W
	P _D	Heatsink T _c =100°C	20	W
Dielectric Strength	V _{dis}	Terminals To Case AC 1 min	2	kV
Insulation Resistance		Terminals To Case 500VDC	100	MΩ
Max Voltage ④ to ⑦	V(④•⑦)	④+,⑦-	6	V
Max Current ⑥ to ④	I(⑥•④)	⑥+,④- (Peak) Duty Max 3/5	100	mA
Max Current ⑤ to ④	I(⑤•④)	⑤+,④- (Q ₂ Collector Current)	500	mA

●Electrical Characteristics (T_c=25°C)

Item	Symbol	Conditions	Ratings	Unit
Q1	Collector Cutoff Current	I _{CEX} V _{CE} =500V, Fig.1 is Measurement Circuit of Peak Input Voltage V _{in} and Collector Cutoff Current I _{CEX} , ②+,④-	MAX 100	μA
	DC Current Gain	h _{FE} V _{CE} = 5V, I _C = 5A, ②+,④-,⑤I _B	15~30	
	Collector to Emitter Saturation Voltage	V _{CE(sat)} I _C =5A, I _B =1.0A, ②+,④-,⑤I _B	MAX 1.7	V
	Driving Saturation Voltage	V _{D(sat)} I _C =1.5A, I _B =0.3A, ②+,④-,⑤I _B	MAX 2.3	V
	Thermal Resistance	θ _{jc} Junction to Case	MAX 2.5	°C/W

●Standard Operating Condition•Design Standard For Application Circuit

Item	Conditions	Ratings	Unit
Input Rated Voltage		AC85~132	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 85	V	
Minimum Input Full Load Output Voltage		$V_{in}=90V, I_O=4.2A$	24.0 ± 0.6	V	Fig 2, ① Refer
Maximum Input Light Load Output Voltage		$V_{in}=132V, I_O=0.0A$	24.0 ± 0.6	V	Fig 2, ② Refer
Over Current Protection	Foldback Current	$V_{in}=132V, V_O=20V$	MAX 6.0	A	Fig 2, ③ Refer
	Short Circuit	$V_{in}=132V, R_O=0.5 \Omega$	Nodamage To Any Device, Automatic Recovery.	—	Fig 2, ④ Refer

Figure in ○=Terminal Sign

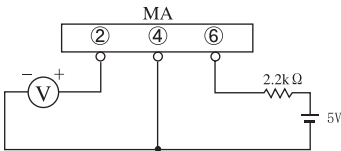


Fig1. Measurement Circuit

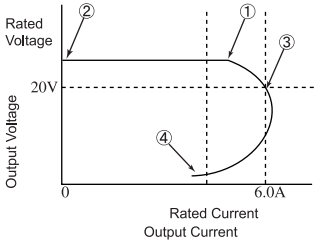
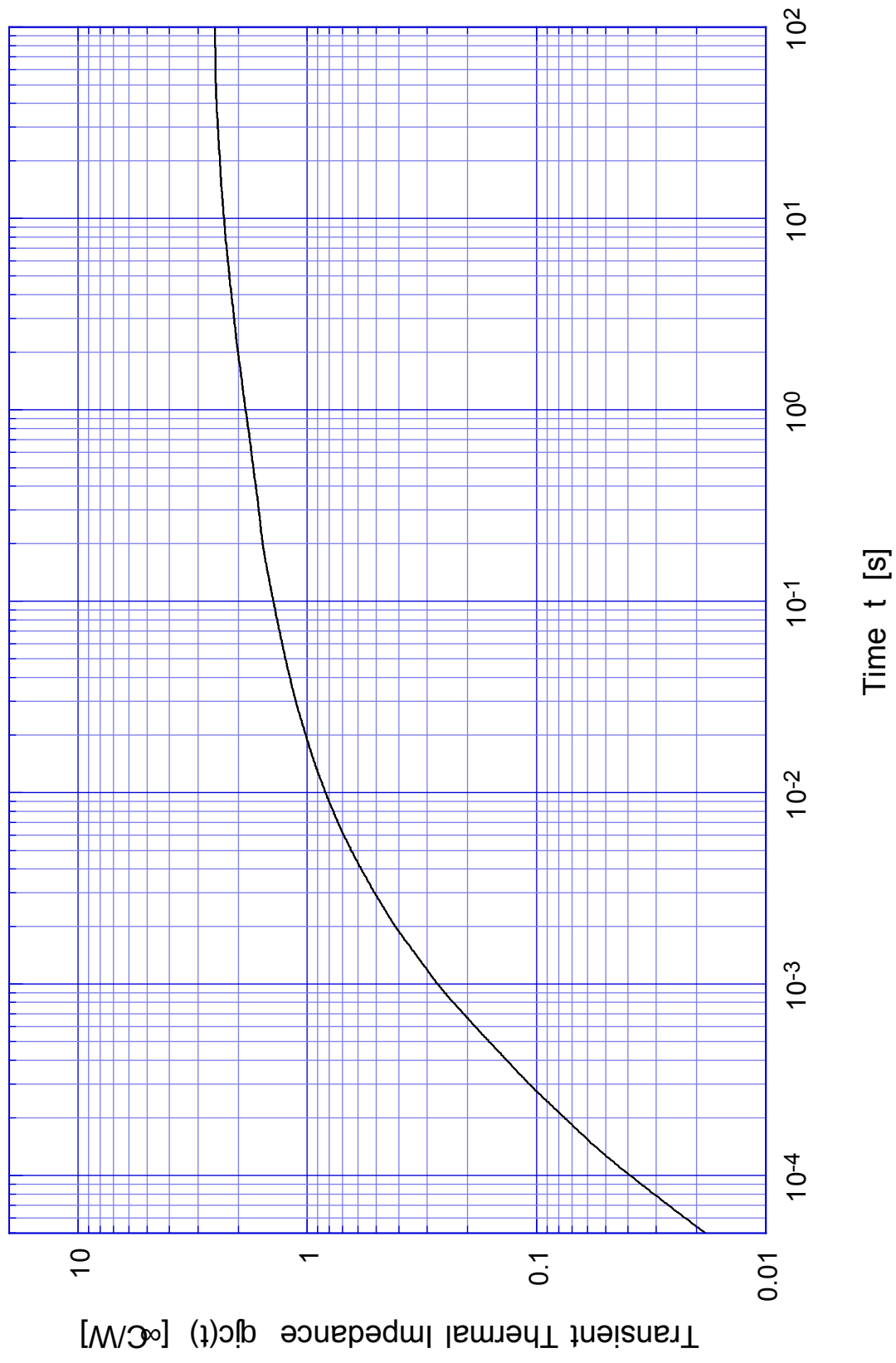


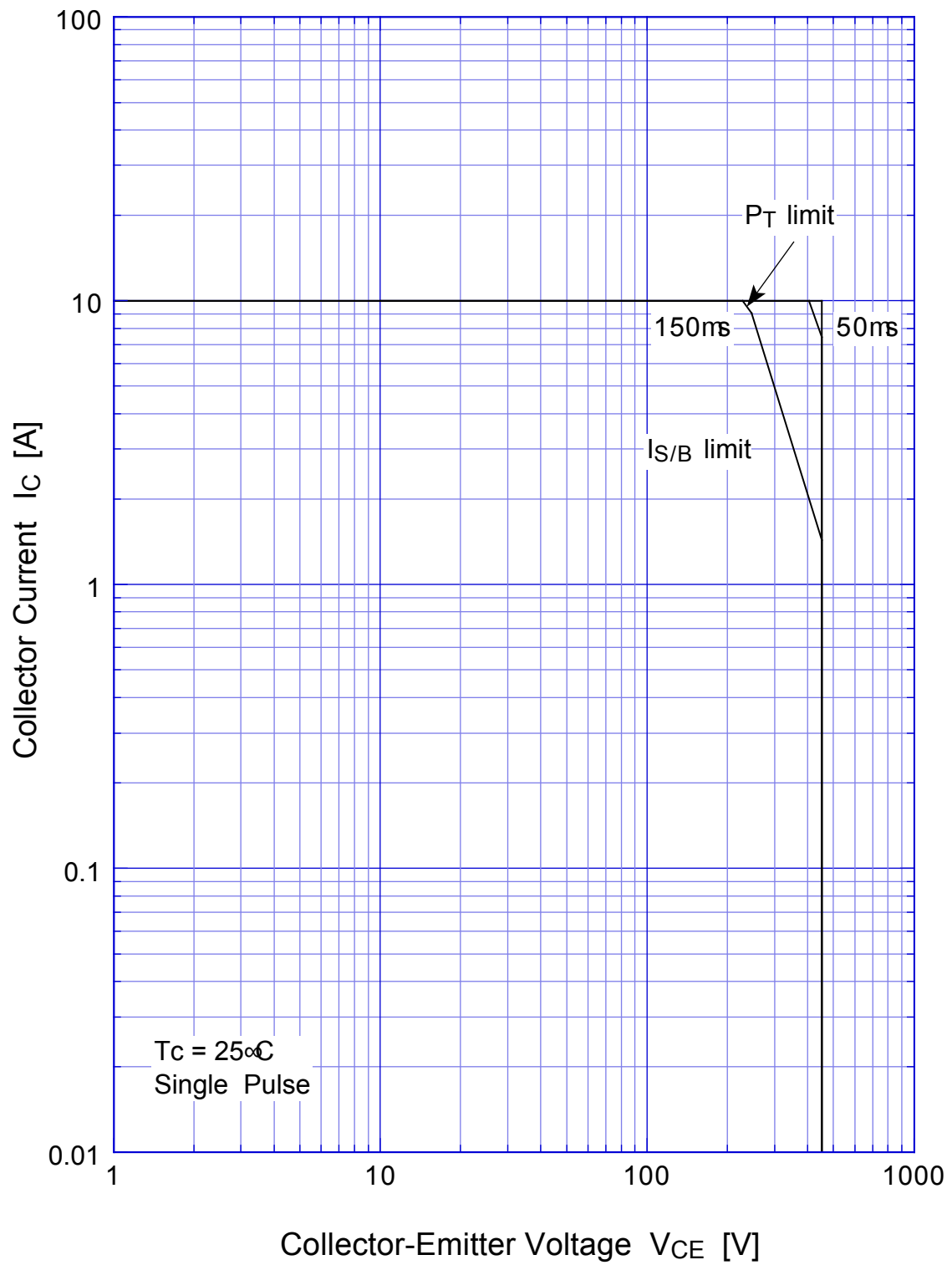
Fig2. Output Voltage/Current

MA3450 Transient Thermal Impedance



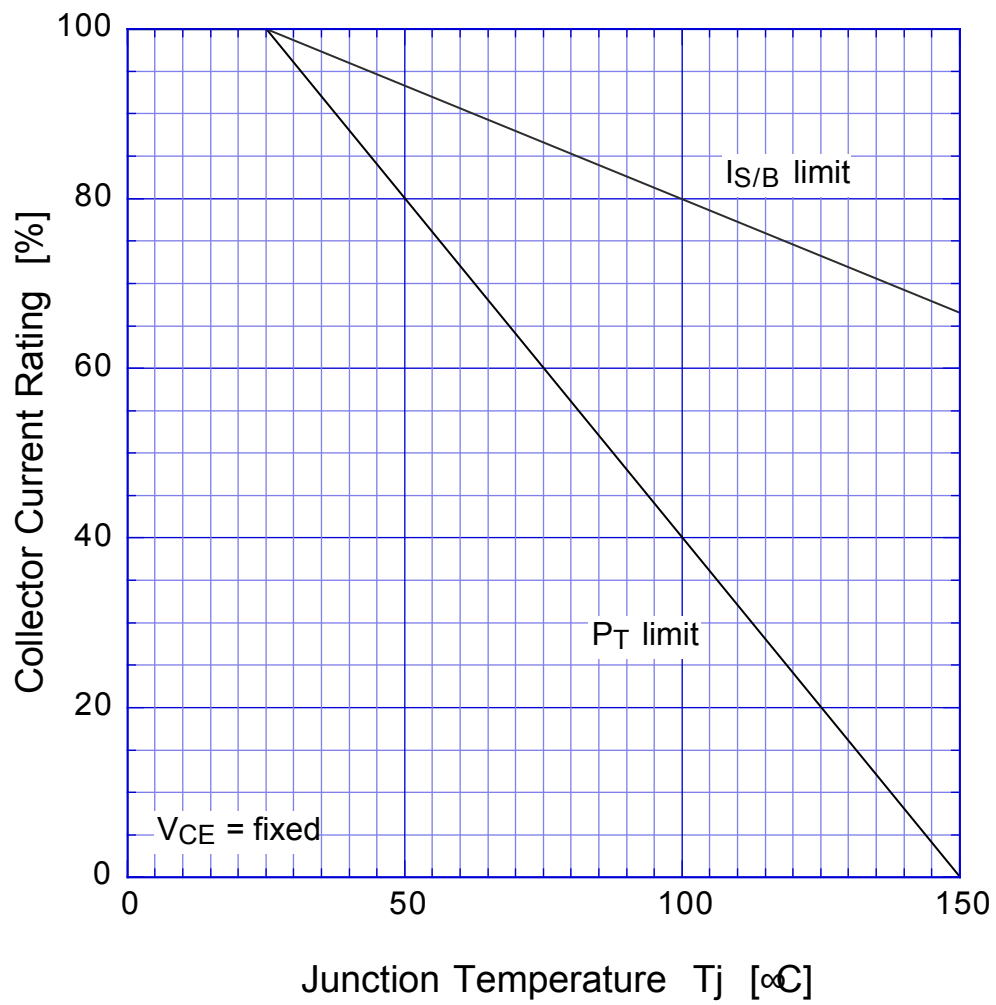
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Forward Bias SOA



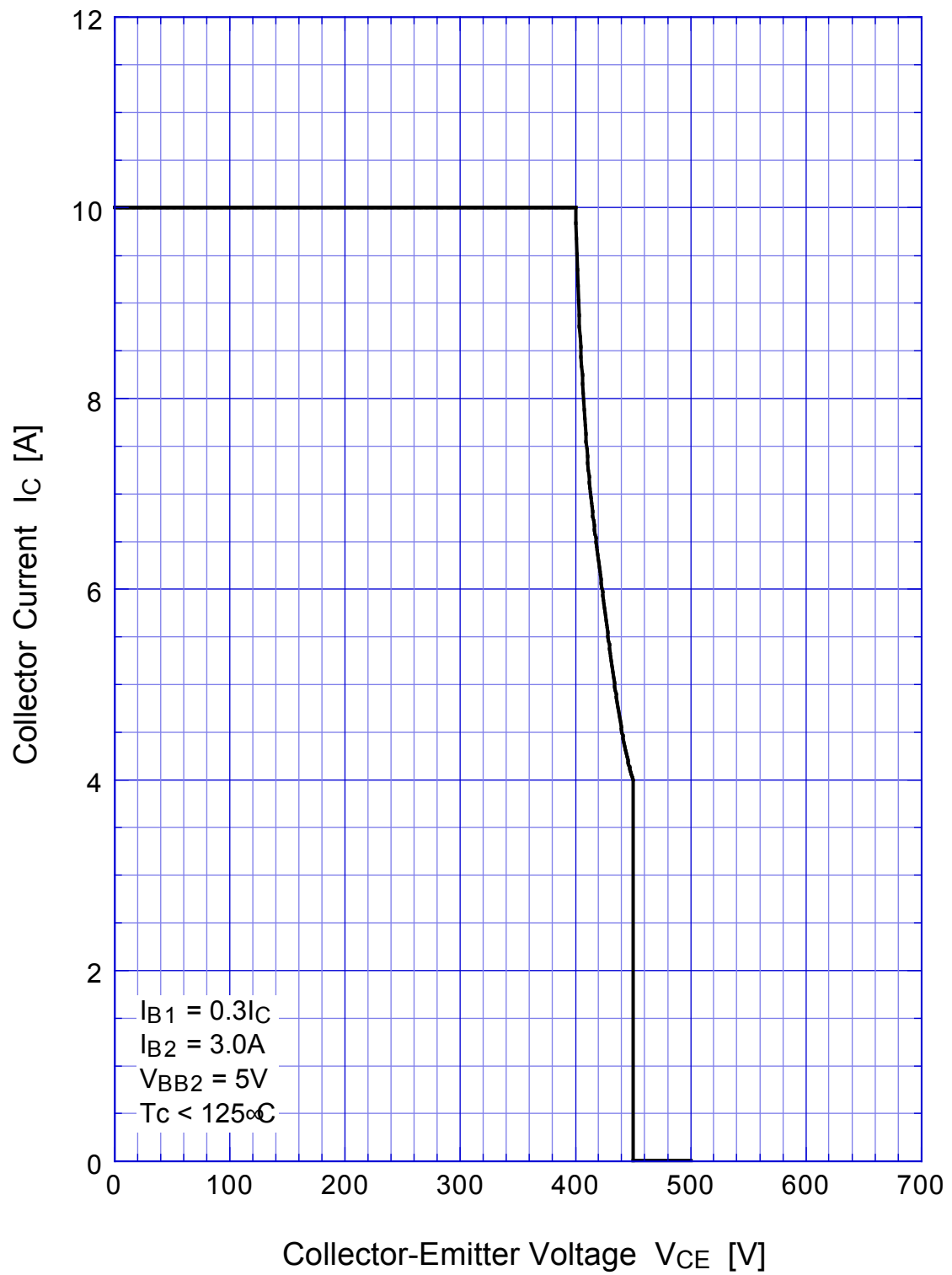
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Collector Current Derating



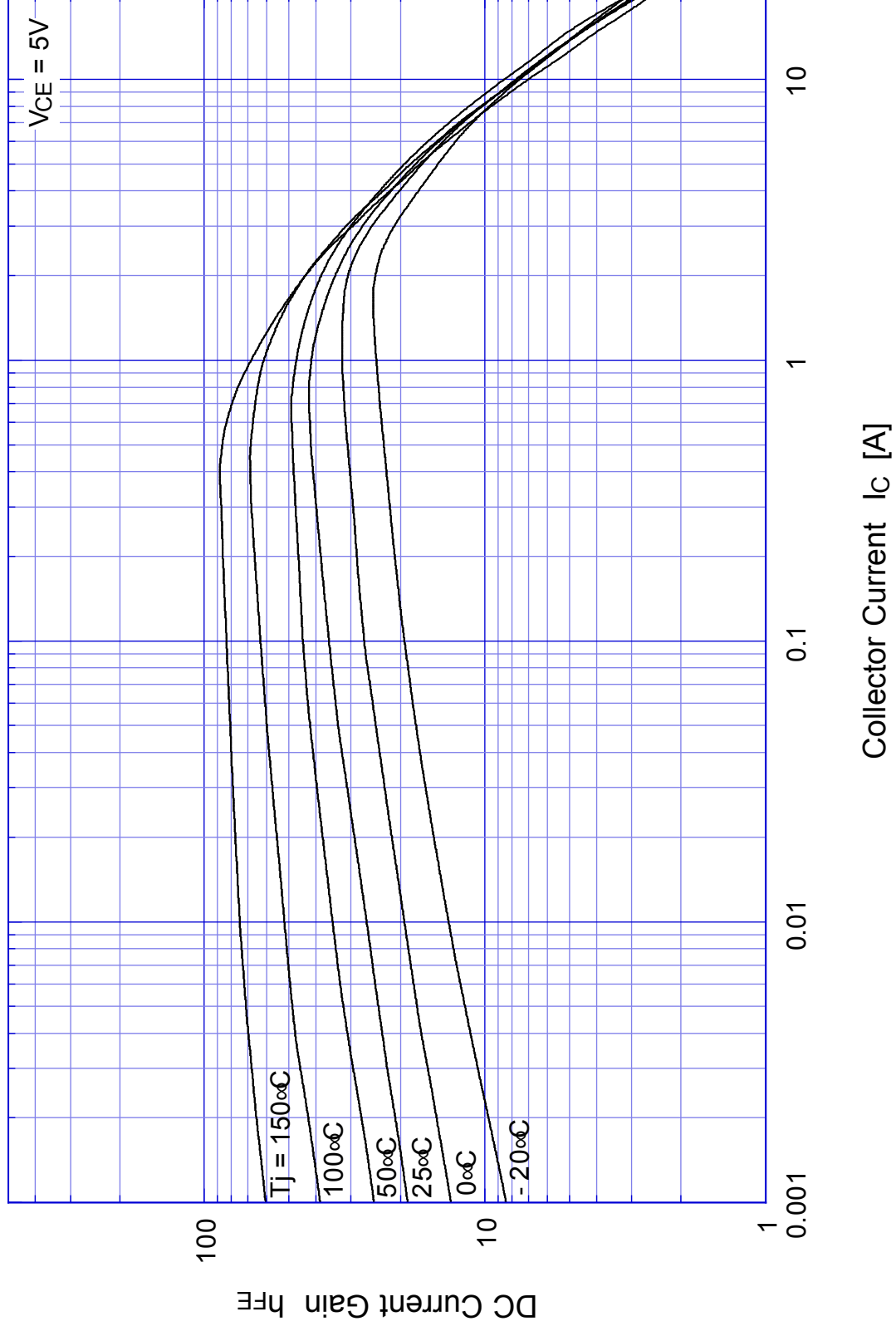
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Reverse Bias SOA



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$h_{FE} - I_C$



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