

ELECTRICAL CHARACTERISTICS (T _a = 25°C)						
SYMBOL	PARAMETER	CONDITIONS	VALUE			UNIT
			MIN.	TYP.	MAX.	
I _{CBO}	Collector cutoff current	V _{CB} = 400V, I _E = 0			10	μA
I _{EBO}	Emitter cutoff current	V _{EB} = 5V, I _C = 0			10	
V _{CE(SUS)}	Collector to emitter sustaining voltage	I _C = 10A, L = 200μH, I _{B1} = 1A, I _{B2} = -4A	400			V
V _{CE(sat)}	Collector to emitter saturation voltage	I _C = 16A, I _B = 3.2A			0.8	V
V _{BE(sat)}	Base to emitter saturation voltage	I _C = 16A, I _B = 3.2A			1.5	
f _T	Transition frequency (Gain-Bandwidth product)	V _{CE} = 10V, I _C = 3.2A		20		MHz
C _{ob}	Output capacitance	V _{CB} = 10V, f = 1MHz		300		pF
V _{(BR)CBO}	Collector to base breakdown voltage	I _C = 1mA, I _E = 0	500			V
V _{(BR)CEO}	Collector to emitter breakdown voltage	I _C = 10mA, R _{BE} = ∞	400			
V _{(BR)EBO}	Emitter to base breakdown voltage	I _E = 1mA, I _C = 0	7			
t _{on}	Turn-on time	I _C = 20A, I _{B1} = 4.0A, I _{B2} = -8A V _{CC} = 200V, R _L = 10Ω			0.5	μs
t _{stg}	Storage time				2.5	
t _f	Fall time				0.3	
h _{FE1}	DC current gain	V _{CE} = 5V, I _C = 3.2A	Rank-L	15		30
			Rank-M	20		40
			Rank-N	30		50
h _{FE2}		V _{CE} = 5V, I _C = 16A	10			
h _{FE3}		V _{CE} = 5V, I _C = 10mA	10			

ORDERING INFORMATION SCHEME	
<p>2SC 4110 B - M</p>	
<p>Transistor series NPN Type</p>	<p>2SC 4110 B - M</p>
<p>Current & Voltage rating, I_C & V_{CEO} 25A / 400V</p>	<p>2SC 4110 B - M</p>
<p>Package type B = TO-3PB</p>	<p>2SC 4110 B - M</p>
<p>DC current gain rank, h_{FE1} L = 15 ~ 30 M = 20 ~ 40 N = 30 ~ 50</p>	<p>2SC 4110 B - M</p>

Switching time test circuit

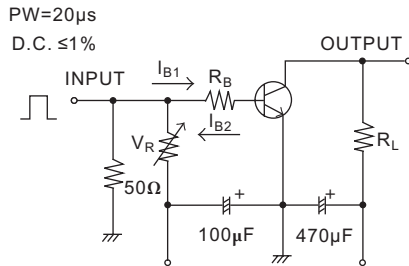


Fig.1 $I_C - V_{CE}$ characteristics

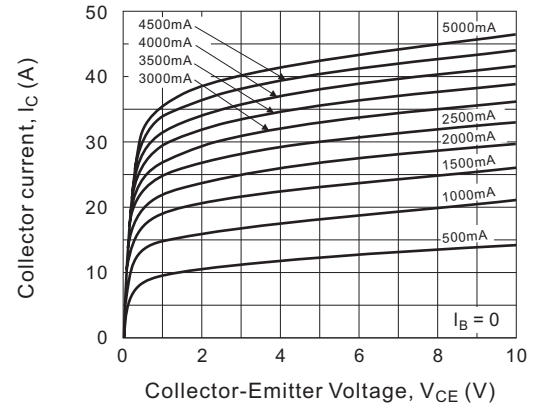


Fig.2 $I_C - V_{BE(on)}$ Temperature characteristics

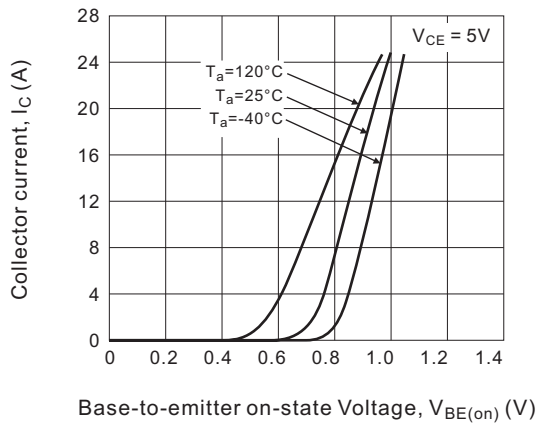


Fig.3 $h_{FE} - I_C$ characteristics

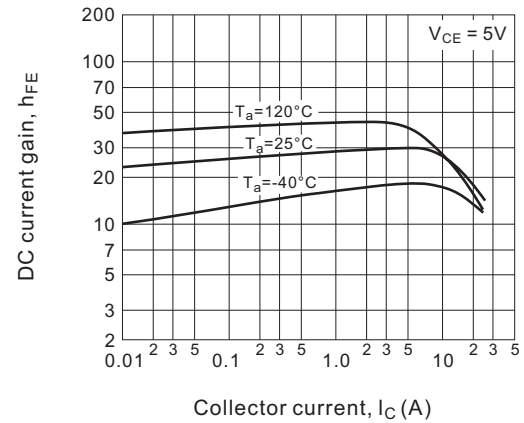


Fig.4 $V_{CE(sat)} - I_C$ characteristics

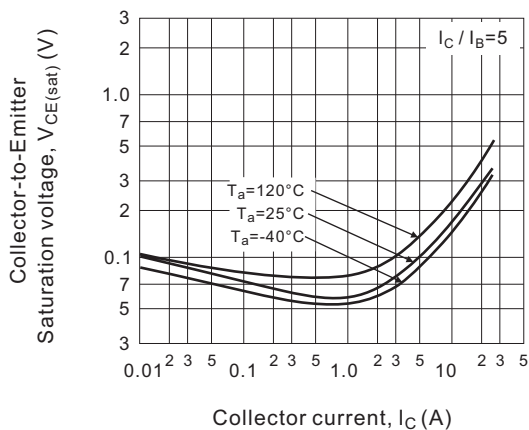


Fig.5 $V_{BE(sat)} - I_C$ Temperature characteristics

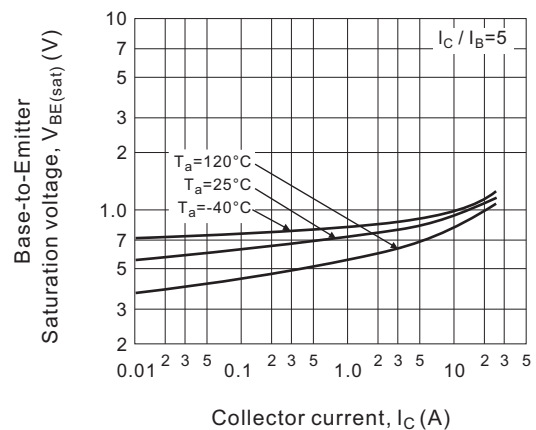


Fig.6 Switching time - I_C characteristics

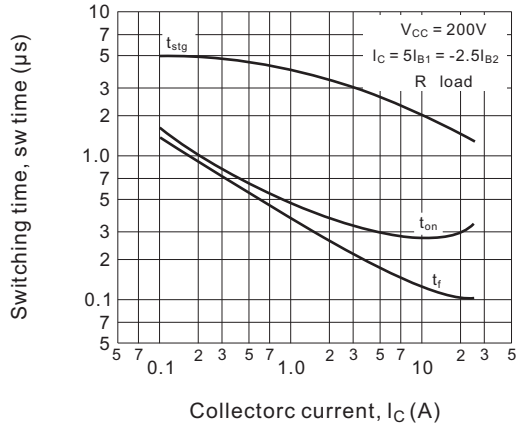


Fig.7 Forward bias SOA

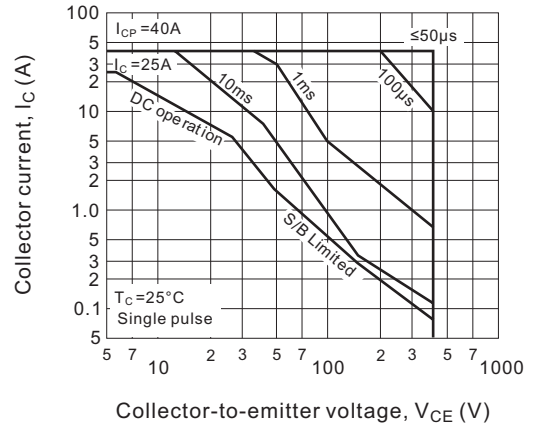


Fig.8 Reverse bias SOA

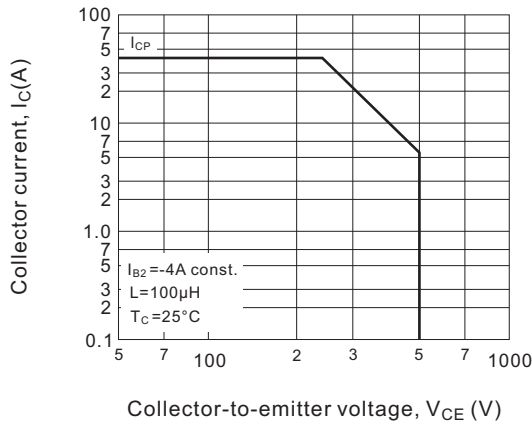


Fig.9 P_C - T_a derating

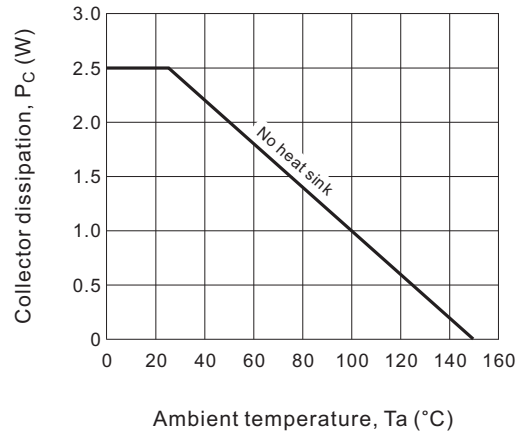


Fig.10 P_C - T_C derating

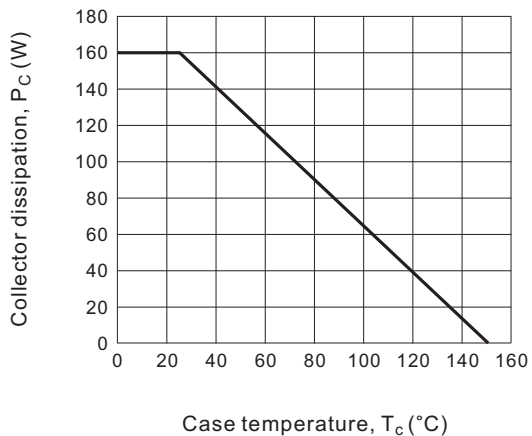


Fig.11 Thermal resistance

