



Inverter Lighting Applications

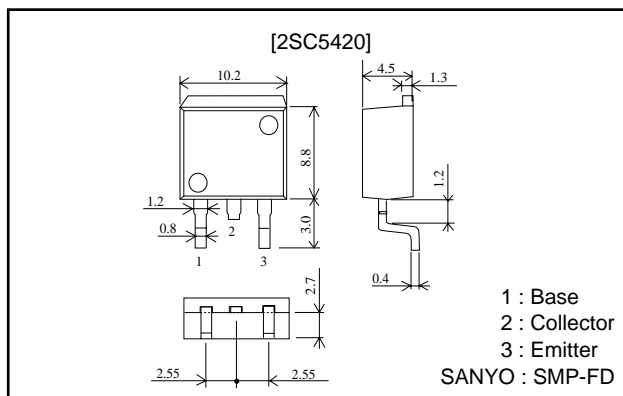
Features

- High breakdown voltage ($V_{CBO}=1000V$).
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

Package Dimensions

unit: mm

2069B-SMP-FD



Specifications

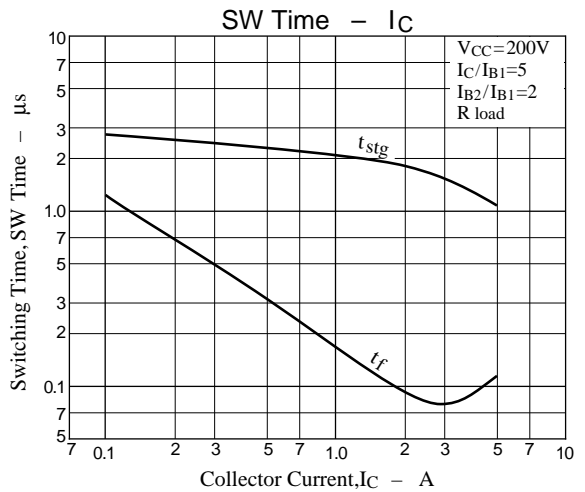
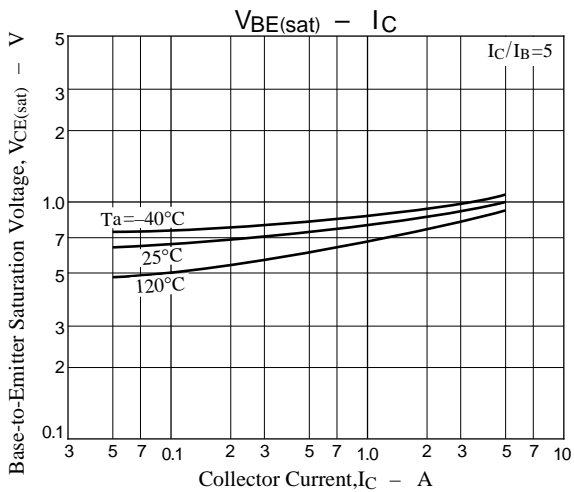
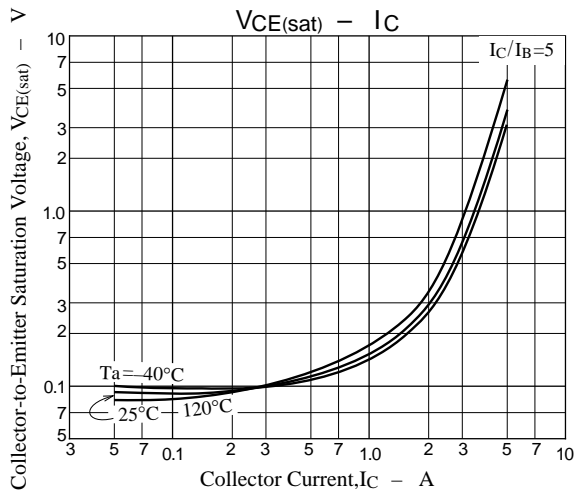
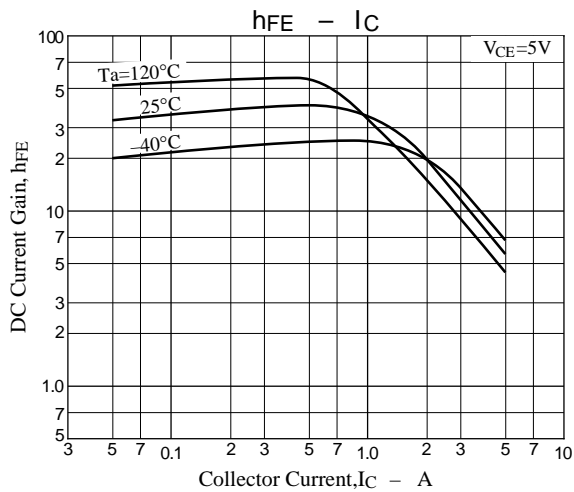
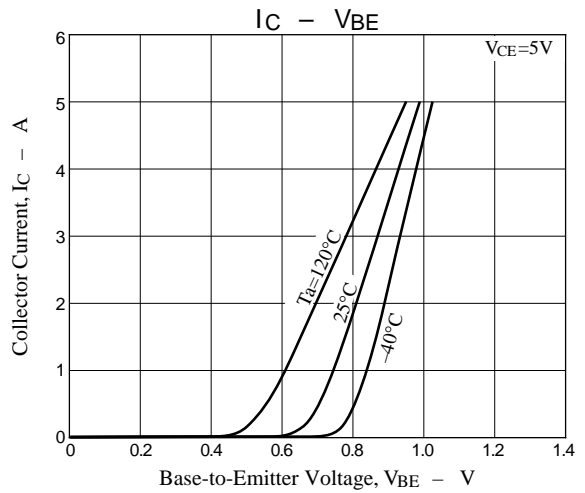
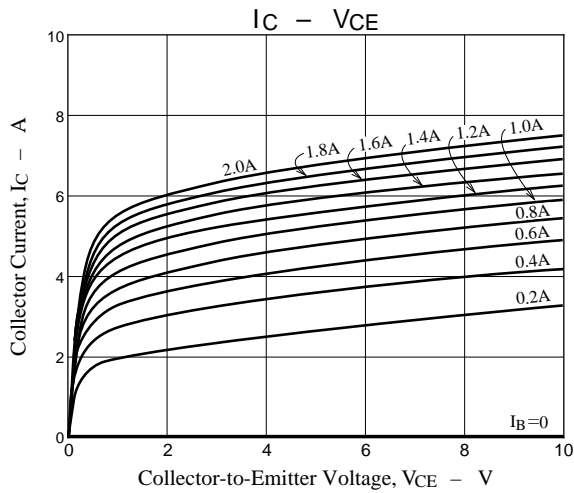
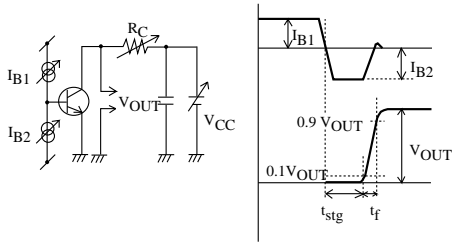
Absolute Maximum Ratings at $T_a=25^{\circ}C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		1000	V
Collector-to-Emitter Voltage	V_{CEO}		450	V
Emitter-to-Base Voltage	V_{EBO}		9	V
Collector Current	I_C		5	A
Collector Current (Pulse)	I_{CP}		10	A
Collector Dissipation	P_C		1.75	W
		$T_c=25^{\circ}C$	50	W
Junction Temperature	T_j		150	$^{\circ}C$
Storage Temperature	T_{stg}		-55 to +150	$^{\circ}C$

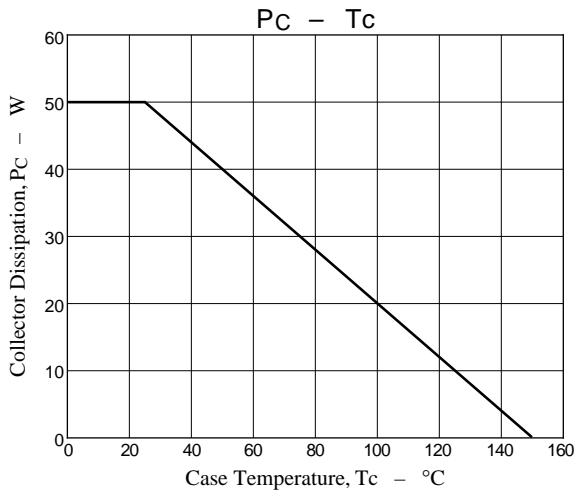
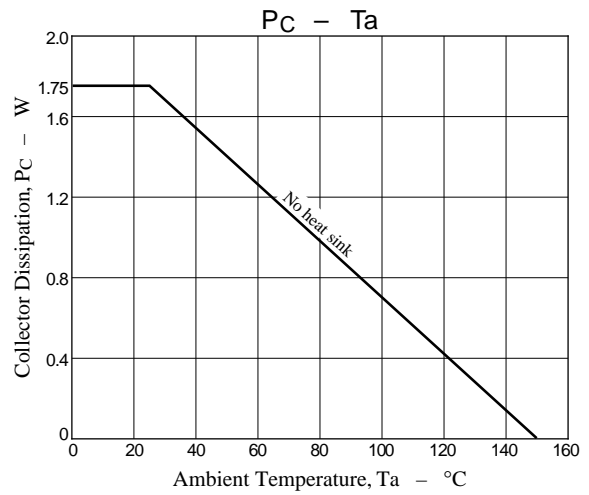
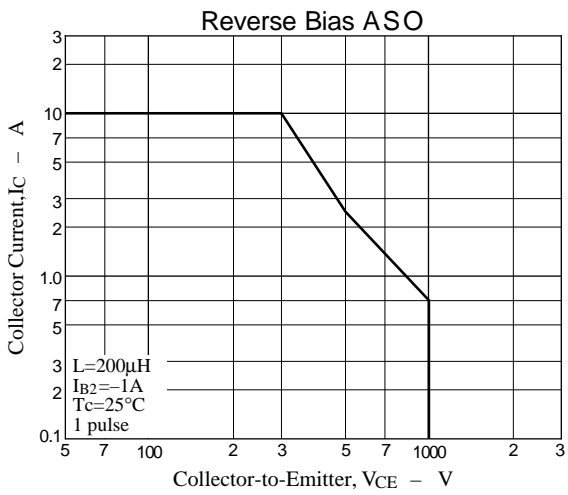
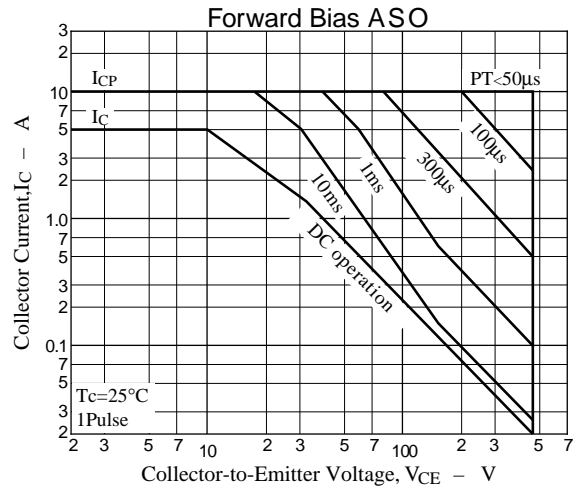
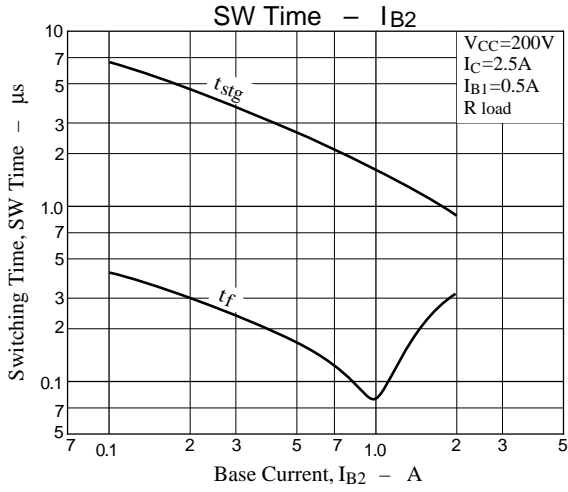
Electrical Characteristics at $T_a=25^{\circ}C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=450V, I_E=0$			10	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=1000V, R_{BE}=0$			1.0	mA
Collector Sustain Voltage	$V_{CEO(SUS)}$	$I_C=100mA, I_B=0$	450			V
Emitter Cutoff Current	I_{EBO}	$V_{EB}=9V, I_C=0$			1.0	mA
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=2.5A, I_B=0.5A$			1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=2.5A, I_B=0.5A$			1.5	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.3A$	30	40	50	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=2.0A$	10			
Storage Time	t_{stg}	$I_C=2.5A, I_{B1}=0.5A, I_{B2}=-1.0A$			2.5	μs
Fall Time	t_f	$I_C=2.5A, I_{B1}=0.5A, I_{B2}=-1.0A$			0.15	μs

Switching Time Test Circuit



2SC5420



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