

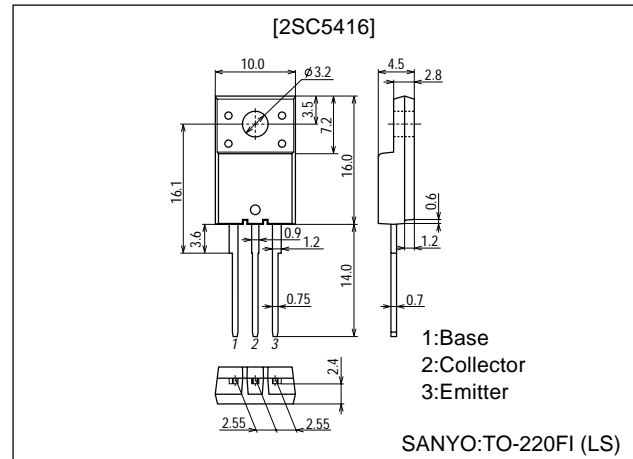
**2SC5416LS****Inverter Lighting Applications****Features**

- High breakdown voltage.
- High reliability (Adoption of HVP process).
- Adoption of MBIT process.

**Package Dimensions**

unit:mm

2079D

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

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	$I_C$		4	A
Collector Current (pulse)	$I_{CP}$		8	A
Collector Dissipation	$P_C$		2	W
		$T_c=25^\circ\text{C}$	25	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=450\text{V}, I_E=0$			10	$\mu\text{A}$
Collector Cutoff Current	$I_{CES}$	$V_{CE}=1000\text{V}, R_{BE}=0$			1.0	mA
Collector Saturation Voltage	$V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0$	450			V
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=9\text{V}, I_C=0$			1.0	mA
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=0.4\text{A}$			1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=0.4\text{A}$			1.5	V
DC Current Gain	$h_{FE1}$	$V_{CE}=5\text{V}, I_C=0.1\text{A}$	30	40	50	
	$h_{FE2}$	$V_{CE}=5\text{V}, I_C=1.5\text{A}$	10			
Storage Time	$t_{stg}$	$I_C=2\text{A}, I_{B1}=0.4\text{A}, I_{B2}=-0.8\text{A}$			2.5	$\mu\text{s}$
Fall Time	$t_f$	$I_C=2\text{A}, I_{B1}=0.4\text{A}, I_{B2}=-0.8\text{A}$			0.15	$\mu\text{s}$

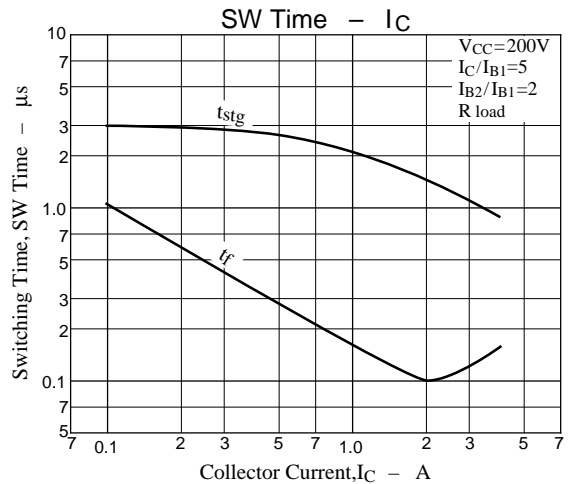
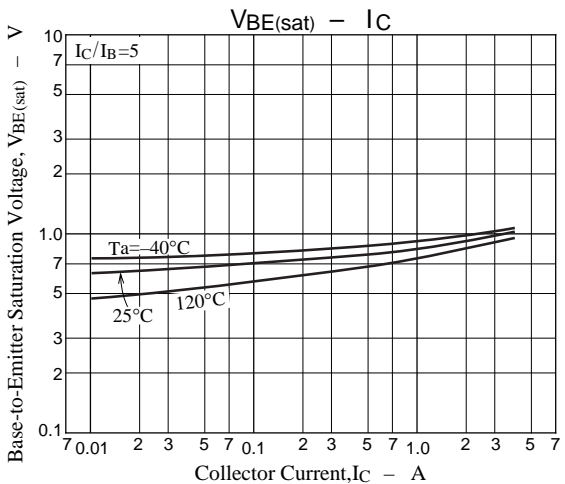
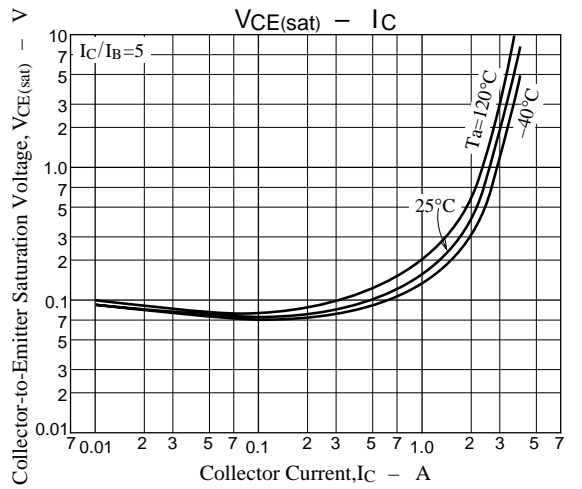
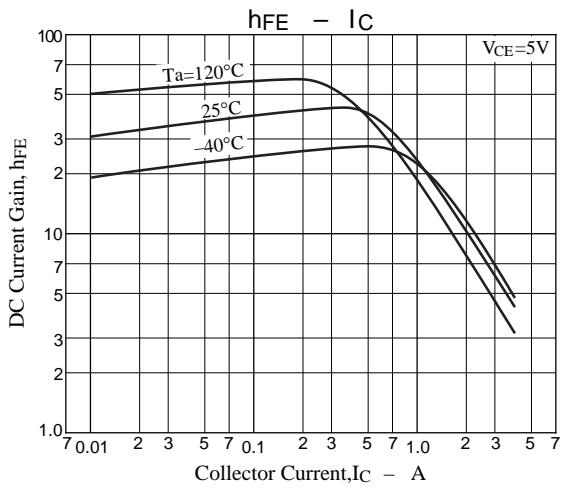
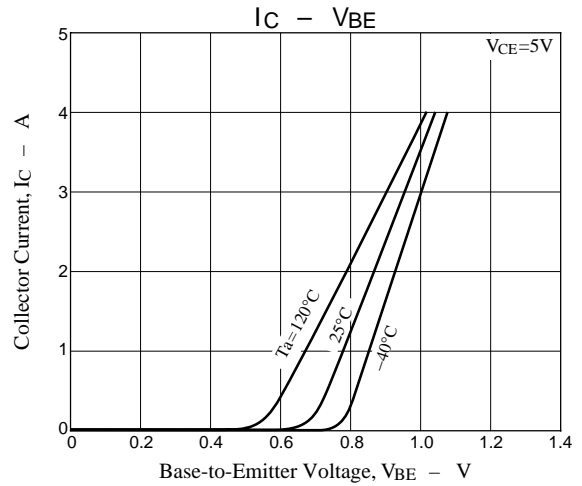
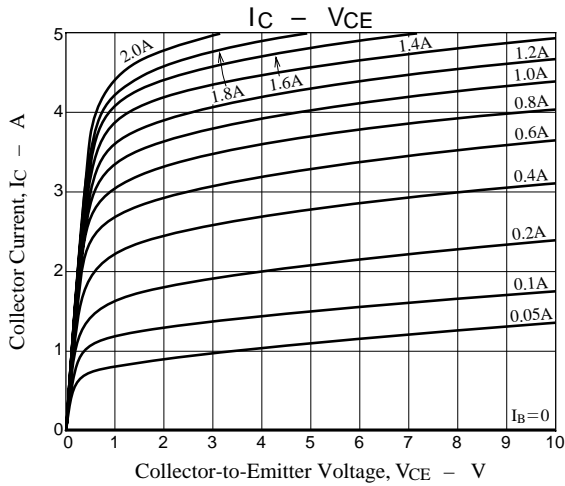
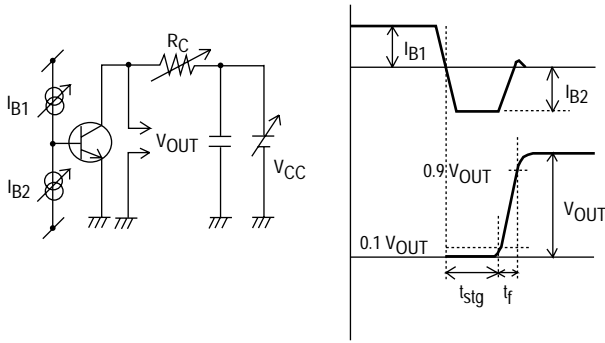
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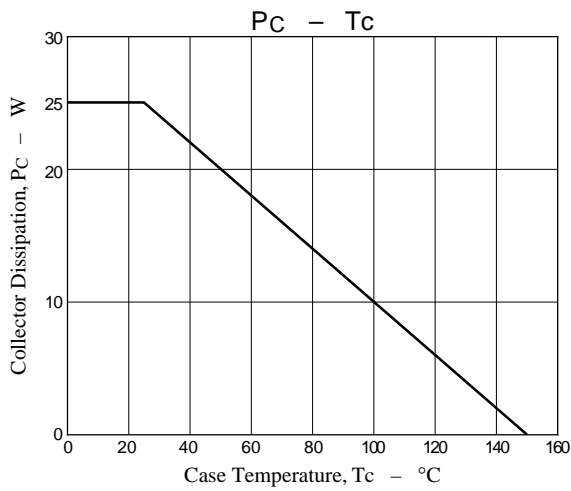
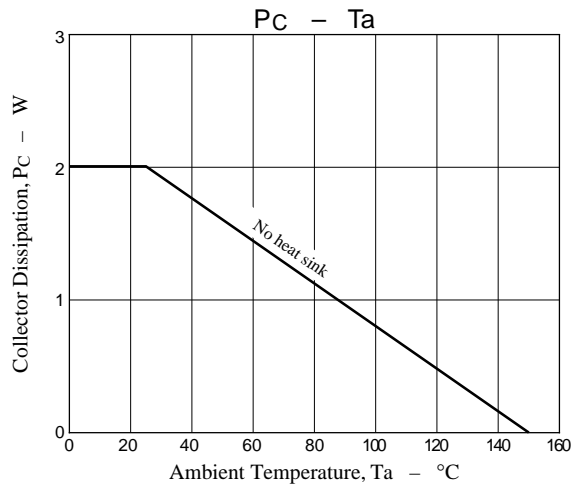
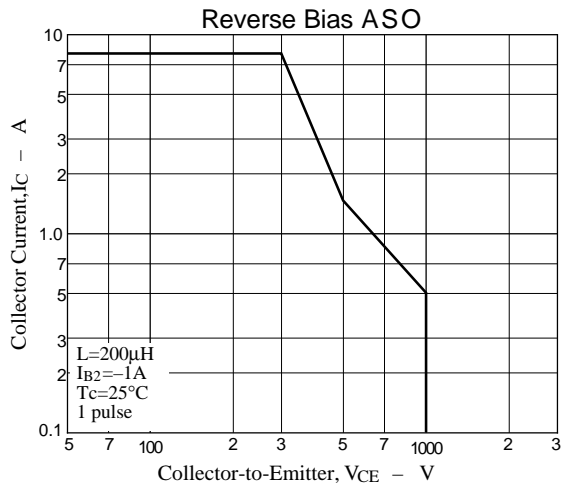
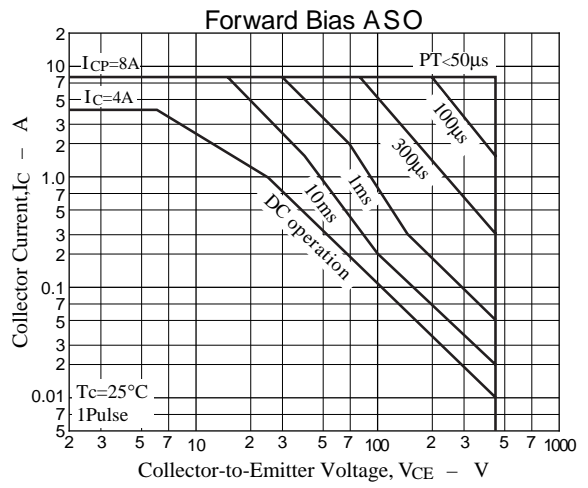
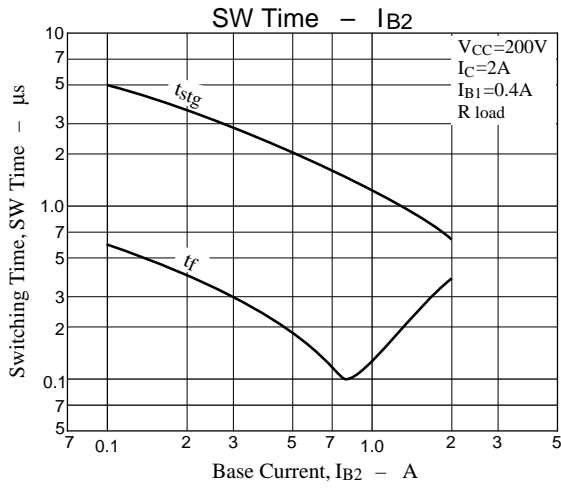
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Switching Time Test Circuit



# 2SC5416LS



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