SLA4061

■Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Rating	Unit
Collector to Base Voltage	V_{CBO}		120	V
Collector to Emitter Voltage	V_{CEO}		120	V
Emitter to Base Voltage	V_{EBO}		6	V
Collector Current	I_C		5	A
Peak Collector Current	I_{CP}	Pw≦1ms, Du≦50%	8	A
Base Current	I_B		0.5	A
Diode Forward Current	I_F	Pw≦0.5ms, Du≦25%	5	A
Diode Forward Current	I_{FSM}	Pw≦10ms, Single Pulse	8	A
Diode Reverse Voltage	V_R		120	V
Collector Power Dissipation	P_D	Ta=25°C, All Elements Operation (Without Heatsink)	5	W
Collector Power Dissipation	P_C	Tc=25°C, All Elements Operation	25	W
Isolation Voltage	V_{ISO}	Between Fin and Lead Pin, AC	1000	Vrms
Storage Temp., Operating Junction Temp.	Tstg,T_J		−40～+150	°C
Thermal Resistance	$\theta j\text{-}c$		5	°C/W

■Electrical Characteristics (Ta=25°C) ●Darlington Transistor (Single Circuit)

Parameter	Symbol	Conditions	Rating			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CBO}=120V			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EBO}=6V			10	mA
Collector to Emitter Voltage	V_{CEO}	I_{CEO}=25mA	120			V
DC Current Gain	h_{FE}	V_{CE}=2V, I_C=3A	2000	5000	15000	
Collector Saturation Voltage	$V_{CE}(sat)$	I_C=3A, I_B=3mA		1.0	1.5	V
Base Saturation Voltage	$V_{BE}(sat)$			1.6	2.0	V
Switching Time	ton	V_{CC}=30V		0.5		μs
	ts	I_C=3A		5.5		μs
	tf	I_{B1}=−I_{B2}=3mA		1.5		μs

●Diode for Absorbing Flyback Voltage (Single Circuit)

Parameter	Symbol	Conditions	Rating			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=10μA	120			V
Forward Voltage	V_F	I_F=1A			1.2	V
Reverse Current	I_R	V_R=120V			10	μA
Reverse Recovery Time	trr	I_F=±100mA		100		ns

■Equivalent Circuits