

SGI (Silicon Group, Inc.)

PNP 2N6034, 2N6035, 2N6036
 NPN 2N6037, 2N6038, 2N6039
 Plastic Darlington Complementary Silicon Power Transistors

Maximum Ratings

Rating	Symbol	Case TO-126			Unit
		2N6034 2N6037	2N6035 2N6038	2N6036 2N6039	
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Collector-Base Voltage	V_{CB}	40	60	80	V
Emitter-Base Voltage	V_{EB}	5.0	5.0	5.0	V
Collector Current Continuous	I_C	4.0	4.0	4.0	A
Total Device Dissipation @ $T_C=25^\circ\text{C}$	P_D	10	10	10	W
Junction Temperature	T_J	150	150	150	$^\circ\text{C}$

Electrical Characteristics

Characterisitics	Symbol	Min	Max	Unit
Collector-Emitter Sustaining Voltage $I_C=100\text{ mA}, I_B=0$	$V_{CEO}(\text{sus})$	2N6034, 2N6037 40	-	V
2N6035, 2N6038 60		-		
2N6036, 2N6039 80		-		
		-		
Collector Cutoff Current $V_{CE}=40\text{V}, I_B=0$	I_{CEO}	2N6034, 2N6037 -	100	μA
$V_{CE}=60\text{V}, I_B=0$		2N6035, 2N6038 -	100	
$V_{CE}=80\text{V}, I_B=0$		2N6036, 2N6039 -	100	
Collector Cutoff Current $V_{CE}=40\text{V}, V_{BE}(\text{off})=1.5\text{V}$	I_{CEX}	2N6034, 2N6037 -	100	μA
$V_{CE}=40\text{V}, V_{BE}(\text{off})=1.5\text{V}$		2N6035, 2N6038 -	100	
$V_{CE}=40\text{V}, V_{BE}(\text{off})=1.5\text{V}$		2N6036, 2N6039 -	100	
Collector Cutoff Current $V_{CB}=40\text{V}, I_E=0$	I_{CBO}	2N6034, 2N6037 -	0.5	mA
$V_{CB}=60\text{V}, I_E=0$		2N6035, 2N6038 -	0.5	
$V_{CB}=80\text{V}, I_E=0$		2N6036, 2N6039 -	0.5	
Emitter Cutoff Current $V_{EB}=5.0\text{V}, I_C=0$	I_{EBO}	-	2.0	mA

DC Current Gain $I_C=0.5\text{ A}, V_{CE}=3.0\text{V}$ $I_C=2.0\text{ A}, V_{CE}=3.0\text{V}$ $I_C=4.5\text{ A}, V_{CE}=3.0\text{V}$	h_{FE}	500 750 100	- 15000 -	-
Collector-Emitter Saturation Voltage $I_C=2.0\text{A}, I_B=8.0\text{mA}$ $I_C=4.0\text{A}, I_B=40\text{mA}$	$V_{CE}(\text{sat})$	- -	2.0 3.0	V
Base-Emitter Saturation Voltage $I_C=4.0\text{A}, I_B=40\text{mA}$	$V_{BE}(\text{sat})$	-	4.0	V
Base-Emitter on Voltage $V_{CE}=3.0\text{V}, I_C=2.0\text{A}$	$V_{BE}(\text{on})$	-	2.8	V
Small Signal Current-Gain $I_C=0.75\text{A}, V_{CE}=10\text{A}, f=1.0\text{ MHz}$	h_{FE}	25	-	-