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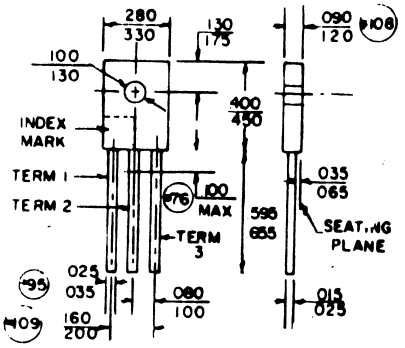
2N6034 2N6035 2N6036 PNP

2N6037 2N6038 2N6039 NPN

COMPLEMENTARY SILICON DARLINGTON TRANSISTORS

JEDEC TO-126 CASE



DESCRIPTION

2N6034, 2N6037 series types are complementary silicon darlington power transistors manufactured by the epitaxial base process and designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

	SYMBOL	2N6034 2N6037	2N6035 2N6038	2N6036 2N6039	UNIT
Collector-Base Voltage	V_{CBO}	40	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Collector Current	I_C		4.0		A
Collector Current-PEAK	I_{CM}		8.0		A
Base Current	I_B		100		mA
Power Dissipation	P_D		40		W
Power Dissipation (T_A=25°C)	P_D		1.5		W
Operating and Storage Junction Temperature	T_J, T_{STG}		-65 to +150		°C
Thermal Resistance	θJC		3.12		°C/W
Thermal Resistance	θJA		83.3		°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6034 2N6037 MIN	2N6034 2N6037 MAX	2N6035 2N6038 MIN	2N6035 2N6038 MAX	2N6036 2N6039 MIN	2N6036 2N6039 MAX	UNIT
I_{CBO}	V_{CB}=Rated V_{CBO}		0.5		0.5		0.5	mA
I_{CEV}	V_{CE}=Rated V_{CEO}, $V_{BE(OFF)}$=1.5V		100		100		100	µA
I_{CEV}	V_{CE}=Rated V_{CEO}, $V_{BE(OFF)}$=1.5V, T_C=125°C		500		500		500	µA
I_{CEO}	V_{CE}=Rated V_{CEO}		100		100		100	µA
I_{EBO}	V_{BE}=5.0V		2.0		2.0		2.0	mA
BV_{CEO}	I_C=100mA	40		60		80		V
$V_{CE(SAT)}$	I_C=2.0A, I_B=8.0mA		2.0		2.0		2.0	V
$V_{CE(SAT)}$	I_C=4.0A, I_B=40mA		3.0		3.0		3.0	V
$V_{BE(SAT)}$	I_C=4.0A, I_B=40mA		4.0		4.0		4.0	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=2.0A		2.8		2.8		2.8	V
h_{FE}	V_{CE}=3.0V, I_C=0.5A	500	-	500	-	500	-	
h_{FE}	V_{CE}=3.0V, I_C=2.0A	750	15K	750	15K	750	15K	
h_{FE}	V_{CE}=3.0V, I_C=4.0A	100	-	100	-	100	-	
f_T	V_{CE}=10V, I_C=0.75A, f=1.0MHz	25		25		25		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHz (PNP Types)		200		200		200	pF
C_{ob}	V_{CB}=10V, I_E=0, f=0.1MHZ (NPN Types)		100		100		100	pF