MICRO ELECTRONICS

2N/PN3053
2N/PN4037

COMPLEMENTARY SILICON TRANSISTORS

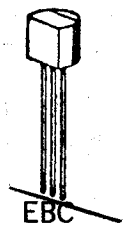
2N/PN3053(NPN) & 2N/PN4037(PNP) are complementary silicon planar epitaxial transistors for use in AF medium power drivers and outputs, as well as for switching applications.

TO-39

C E B

2N3053
2N4037

TO-92A



EBC

PN3053
PN4037

ABSOLUTE MAXIMUM RATINGS

For p-n-p devices, voltage and current values are negative.

		2N/PN3053	2N/PN4037
Collector-Base Voltage	V_{CBO}	60V	60V
Collector-Emitter Voltage	V_{CEO}	40V	40V
Emitter-Base Voltage	V_{EBO}	5V	7V
Collector Current	I_C	0.7A	1A
Total Power Dissipation @ $T_A \leq 25^\circ C$	P_{tot}	1W (2N3053/2N4037) 0.625W (PN3053/PN4037)	
Operating Junction & Storage Temperature	T_j, T_{stg}	-65 to +200°C (2N3053/2N4037) -55 to +150°C (PN3053/PN4037)	

ELECTRICAL CHARACTERISTICS (T_A=25°C)

PARAMETER	SYMBOL	2N/PN3053 MIN	2N/PN3053 MAX	2N/PN4037 MIN	2N/PN4037 MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CBO}	60		60		V	I_C=0.1mA I_E=0
Collector-Emitter Breakdown Voltage	LV_{CER} *	50				V	I_C=100mA R_{BE}=10Ω
				60		V	I_C=100mA R_{BE}=200Ω
Collector-Emitter Breakdown Voltage	LV_{CEV} *			60		V	I_C=100mA V_{EB}=1.5V
Collector-Emitter Breakdown Voltage	LV_{CEO} *	40		40		V	I_C=100mA I_B=0
Emitter-Base Breakdown Voltage	BV_{EBO}	5		7		V	I_E=0.1mA I_C=0
Collector Cutoff Current	I_{CEV}		0.25			μA	V_{CE}=30V V_{EB}=1.5V
Collector Cutoff Current	I_{CBO}				0.25	μA	V_{CB}=60V I_E=0
Collector Cutoff Current	I_{CEO}				5	μA	V_{CE}=30V I_B=0
Emitter Cutoff Current	I_{EBO}		0.25			μA	V_{EB}=4V I_C=0
					1	μA	V_{EB}=5V I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$*		1.4		1.4	V	I_C=150mA I_B=15mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$*		1.7			V	I_C=150mA I_B=15mA
D.C. Current Gain	H_{FE} *			15			I_C=1mA V_{CE}=10V
		50	250	50	250		I_C=150mA V_{CE}=10V
		25					I_C=150mA V_{CE}=2.5V

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PARAMETER	SYMBOL	2N/PN3053* MIN	2N/PN3053* MAX	2N/PN4037 MIN	2N/PN4037 MAX	UNIT	TEST CONDITIONS
Current Gain-Bandwidth Product	f_T	100		60		MHz	I_C=50mA V_{CE}=10V
Collector-Base Capacitance	Cob		15		30	pF	V_{CB}=10V I_E=0 f=1MHz
Emitter-Base Capacitance	Cib		80		90	pF	V_{EB}=0.5V I_C=0 f=1MHz

* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%

TYPICAL CHARACTERISTICS