

# MICRO ELECTRONICS

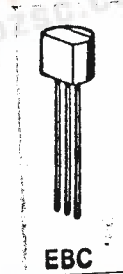
查询PN3638代理商

捷多邦, 专业PCB打样工厂, 24小时加急出货

## PN3638,A

PNP  
SILICON  
TRANSISTORS

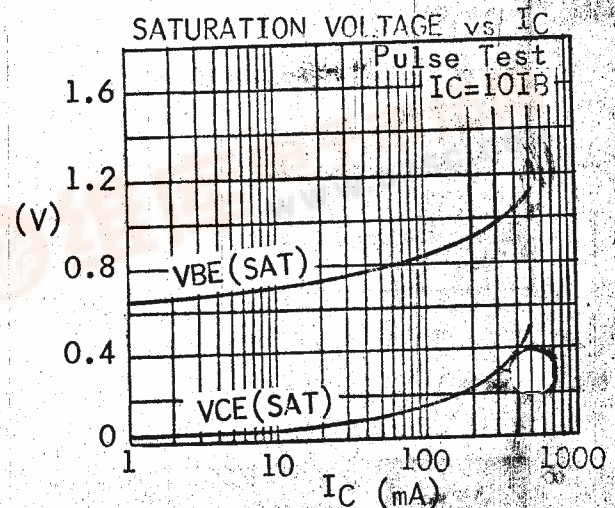
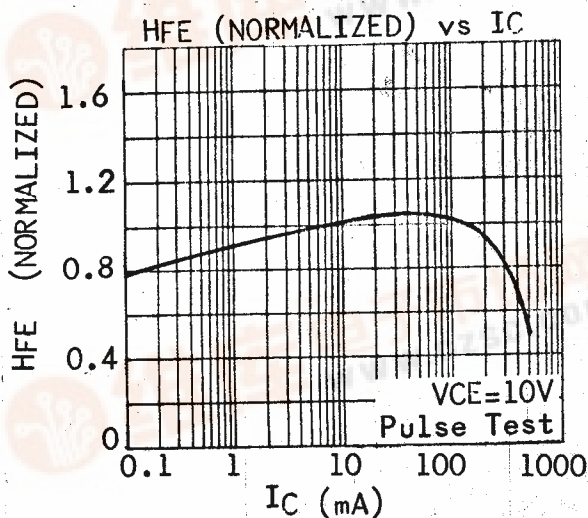
PN3638, PN3638A are PNP silicon planar epitaxial transistors designed for small signal general purpose amplifiers and switches.



### ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage	V <sub>CB0</sub>	25V
Collector-Emitter Voltage (V <sub>BE</sub> =0)	V <sub>CES</sub>	25V
Collector-Emitter Voltage (I <sub>B</sub> =0)	V <sub>CEO</sub>	25V
Emitter-Base Voltage	V <sub>EB0</sub>	4V
Collector Current-Continuous	I <sub>C</sub>	500mA
Total Power Dissipation (T <sub>A</sub> =25°C) (T <sub>C</sub> =25°C)	P <sub>tot</sub>	625mW 1W
Operating Junction & Storage Temperature	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150°C

### TYPICAL CHARACTERISTICS (T<sub>A</sub>=25°C)



ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BVCBO	25		V	$I_C=100\mu\text{A}$ $I_E=0$
Collector-Emitter Breakdown Voltage	BVCEs	25		V	$I_C=100\mu\text{A}$ $V_{BE}=0$
Collector-Emitter Breakdown Voltage	LVCEO	25		V	$I_C=10\text{mA}$ $I_B=0^*$
Emitter-Base Breakdown Voltage	BVEBO	4		V	$I_E=100\mu\text{A}$ $I_C=0$
Collector Reverse Current	ICES		35	nA	$V_{CE}=15\text{V}$ $V_{BE}=0$
			2	$\mu\text{A}$	$V_{CE}=15\text{V}$ $T_A=65^{\circ}\text{C}$
D.C. Current Gain	PN3638	HFE	20		$I_C=10\text{mA}$ $V_{CE}=10\text{V}$
			30		$I_C=50\text{mA}$ $V_{CE}=1\text{V}^*$
			20		$I_C=300\text{mA}$ $V_{CE}=2\text{V}^*$
	PN3638A	HFE	80		$I_C=1\text{mA}$ $V_{CE}=10\text{V}$
			100		$I_C=10\text{mA}$ $V_{CE}=10\text{V}$
			100		$I_C=50\text{mA}$ $V_{CE}=1\text{V}^*$
			20		$I_C=300\text{mA}$ $V_{CE}=2\text{V}^*$
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$		0.25	V	$I_C=50\text{mA}$ $I_B=2.5\text{mA}^*$
			1.0	V	$I_C=300\text{mA}$ $I_B=30\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$		1.1	V	$I_C=50\text{mA}$ $I_B=2.5\text{mA}^*$
		0.8	2.0	V	$I_C=300\text{mA}$ $I_B=30\text{mA}^*$
Current Gain-Bandwidth Product	PN3638	$f_T$	100	MHz	$I_C=50\text{mA}$ $V_{CE}=3\text{V}$
	PN3638A		150		$f=100\text{MHz}$
Output Capacitance	PN3638	$C_{ob}$		20	pF $V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$
	PN3638A			10	
Input Capacitance	$C_{ib}$		25	pF	$V_{EB}=0.5\text{V}$ $I_C=0$ $f=1\text{MHz}$

\* Pulse Test : Pulse Width =  $300\mu\text{s}$ , Duty Cycle = 1%.

h-PARAMETER @  $I_C=10\text{mA}$   $V_{CE}=10\text{V}$   $f=1\text{KHz}$

PARAMETER	SYMBOL	PN3638		PN3638A		UNIT
		MIN	MAX	MIN	MAX	
Small Signal Current Gain	$h_{fe}$	25		100		
Input Resistance	$h_{ie}$		1.5		2.0	$\text{K}\Omega$
Output Conductance	$h_{oe}$		1.2		1.2	mmhos
Voltage Feedback Ratio	$h_{re}$		2.6		1.5	$\times 10^{-3}$