



Web site: WWW.Crystalonics.com Phone: (631-981-6140) Fax: (631-585-4858)

* See price list for ordering information

HIGH VOLTAGE PNP SILICON TRANSISTORS

2N3634
THRU
2N3637

2N3634UB
THRU
2N3637UB

- High Voltage—to 175 V. V_{CE0}
- Switching and Amplifier Applications

GEOMETRY 480

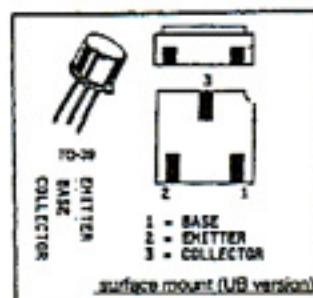


.031" X.031"
See note below

MAXIMUM RATINGS

Rating	Symbol	2N3634 2N3635	2N3636 2N3637	Unit
Collector-Emitter Voltage	V_{CE0}	140	175	Vdc
Collector-Base Voltage	V_{CB}	140	175	Vdc
Emitter-Base Voltage	V_{EB}	5.0		Vdc
Collector Current	I_C	1.0		Adc
Total Device Dissipation @ $T_A = 25^{\circ}\text{C}$ Derate above 25°C	P_D	1.0 5.71	Watt mW/ $^{\circ}\text{C}$	
Total Device Dissipation @ $T_C = 25^{\circ}\text{C}$ Derate above 25°C	P_D	5.0 28.6	Watts mW/ $^{\circ}\text{C}$	
Operating and Storage Junction Temperature Range	T_J, T_{stg}	- 65 to + 200		$^{\circ}\text{C}$

PACKAGE STYLES



ELECTRICAL CHARACTERISTICS AT 25°C FREE-AIR TEMPERATURE

PARAMETER	TEST CONDITIONS	2N3634		2N3635		2N3636		2N3637		UNIT
		min	max	min	max	min	max	min	max	
BV_{CBO} Collector-Base Breakdown Voltage	$I_C = -100 \mu\text{A}, I_E = 0$	-140		-140		-175		-175		V
BV_{CEO} Collector-Emitter Breakdown Voltage	$I_C = -10 \text{ mA}, I_B = 0$. See Note	-140		-140		-175		-175		V
BV_{EBO} Emitter-Base Breakdown Voltage	$I_E = -10 \mu\text{A}, I_C = 0$	-5		-5		-5		-5		V
I_{CBO} Collector Cutoff Current	$V_{CB} = -100\text{V}, I_E = 0$	-100		-100		-100		-100		nA
I_{EBO} Emitter Cutoff Current	$V_{EB} = -3\text{V}, I_C = 0$	-50		-50		-50		-50		nA
h_{FE} Static Forward Current Transfer Ratio	$V_{CE} = -10\text{V}, I_C = -0.1 \text{ mA}$	25		55		25		55		
	$V_{CE} = -10\text{V}, I_C = -1 \text{ mA}$	45		90		45		90		
	$V_{CE} = -10\text{V}, I_C = -10 \text{ mA}$	50		100		50		100		
	$V_{CE} = -10\text{V}, I_C = -50 \text{ mA}$	50	150	100	300	50	150	100	300	
	$V_{CE} = -10\text{V}, I_C = -150 \text{ mA}$	30		60		30		60		
V_{BE} Base-Emitter Voltage	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$	See		-0.8		-0.8		-0.8		V
	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$	Note	-0.65 -0.9	-0.65 -0.9	-0.65 -0.9	-0.65 -0.9	-0.65 -0.9	-0.65 -0.9		V
$V_{CE(sat)}$ Collector-Emitter Saturation Voltage	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$	See		-0.3		-0.3		-0.3		V
	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$	Note	0.6	0.6	0.6	0.6	0.6	0.6		V
r_{ie} Small-Signal Common-Emitter Input Impedance	$V_{CE} = -10\text{V}, I_C = -10 \text{ mA}, f = 1 \text{ kHz}$	0.1	0.6	0.2	1.2	0.1	0.6	0.2	1.2	k Ω
h_{fe} Small-Signal Common-Emitter Forward Current Transfer Ratio		40	180	80	320	40	180	80	320	
r_{re} Small-Signal Common-Emitter Reverse Voltage Transfer Ratio		3x 10 ⁻⁴		3x 10 ⁻⁴		3x 10 ⁻⁴		3x 10 ⁻⁴		
h_{oe} Small-Signal Common-Emitter Output Admittance		200		200		200		200		μmho

NOTE: These parameters must be measured using pulse techniques. $t_w 300 \mu\text{s}$, duty cycle < 2%.

NOTE: All electrical characteristics are for packaged devices only.