

SILICON NPN TRANSISTOR

Devices

2N6232

**10 AMP
100 V**

- FAST SWITCHING
- LOW SATURATION VOLTAGE

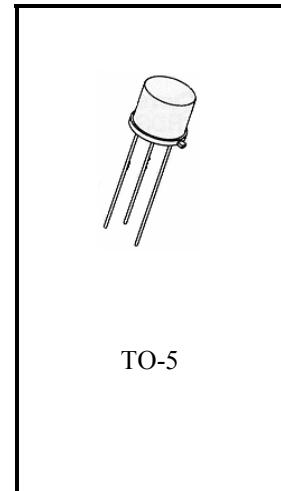
MAXIMUM RATINGS

Ratings	Symbol	Value	Units
Collector-Emitter Voltage	V_{CEO}	100	Vdc
Collector-Base Voltage	V_{CBO}	140	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	Vdc
Collector Current – Peak ⁽¹⁾	I_C	10	Adc
Base Current – Continuous	I_B		Adc
Total Power Dissipation @ $T_C = 25^{\circ}C$	P_D	1.25	W W/ $^{\circ}C$
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^{\circ}C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	6.67	$^{\circ}C/W$

(1) Pulse Test: Pulse Width = Duty Cycle < %



ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}C$ unless otherwise noted)

Characteristics	Symbol	Min.	Max.	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage ⁽²⁾ $I_C = 100 \text{ mAdc}, I_B = 0$	$V_{CEO(sus)}$	100		Vdc
Collector-Emitter Cutoff Current $V_{CE} = 140 \text{ Vdc}, R_{be} = 0$	I_{CES}		0.2	uAdc
Collector Cutoff Current $V_{CE} = 100 \text{ Vdc}, R_{BE} = 0 \Omega, T_C = 150^{\circ}C$	I_{CES}		0.1	mAdc
Emitter-Base Cutoff Current $V_{EB} = 7.0 \text{ Vdc}, I_C = 0$	I_{EBO}		10	uAdc

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
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ON CHARACTERISTICS ⁽²⁾

DC Current Gain $I_C = 5.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$	h_{FE}	25	100	
Collector-Emitter Saturation Voltage $I_C = 5 \text{ Adc}, I_B = .5 \text{ Adc}$	$V_{CE(sat)}$		0.7	Vdc
Base-Emitter Saturation Voltage $I_C = 10 \text{ Adc}, I_B = 1.0 \text{ Adc}$	$V_{BE(ON)}$		1.8	Vdc

DYNAMIC CHARACTERISTICS

Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$	C_{obo}		150	P^F
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SWITCHING CHARACTERISTICS

	$I_C = 5.0 \text{ Adc}, I_{B1} = I_{B2} = 0.5 \text{ A}$ Duty Cycle – 2.0%	t_{on}		250	ns
		t_{off}		1200	ns

(2) Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2.0%.