

2N3677

CASE 026-03, STYLE 1
TO-46 (TO-206AB)

LOW POWER CHOPPER TRANSISTOR

PNP SILICON

4

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CES}	20	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	30	V
Collector Current — Continuous	I_C	100	mA
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	400 2.3	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Emitter-Collector Breakdown Voltage ($I_C = 1.0$ nA)	$V_{(BR)ECS}$	20	—	V
Collector-Base Breakdown Voltage ($I_C = 1.0$ mA)	$V_{(BR)CBO}$	30	—	V
Emitter-Base Breakdown Voltage ($I_E = 1.0$ mA)	$V_{(BR)EBO}$	30	—	V
Collector Cutoff Current ($V_{CB} = 30$ V)	I_{CBO}	—	1.0	nA
Emitter Cutoff Current ($V_{EB} = 30$ V)	I_{EBO}	—	1.0	nA

ON CHARACTERISTICS

Offset Voltage ($I_B = 1.0$ mA)	$V_{EC(ofs)}$	—	1.0	mV
Common-Collector static forward transfer ratio ($I_E = 1.0$ mA, $V_{EC} = 6.0$ V)	h_{fe}	4.0	—	—
On series resistance ($I_B = 1.0$ mA)	r_s	0.1	8.0	ohms

SMALL-SIGNAL CHARACTERISTICS

Output Capacitance ($V_{CB} = 6.0$ V, $f = 159$ kHz)	C_{obo}	—	10	pF
Input Capacitance ($V_{EB} = 6.0$ V, $f = 159$ kHz)	C_{ibo}	—	6.0	pF
Magnitude of Forward Current Transfer Ratio, Common-Emitter ($I_C = 1.0$ mA, $V_{CE} = 6.0$ V, $f = 1.0$ MHz)	$ h_{fe} $	5.0	—	—