

P038

(CECC 50002-169)
CASE 79, STYLE 1
TO-39 (TO-205AD)

HIGH VOLTAGE TRANSISTOR

PNP SILICON

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MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	300	V _{dc}
Collector-Base Voltage	V _{CBO}	300	V _{dc}
Emitter-Base Voltage	V _{EBO}	5	V _{dc}
Collector Current - Continuous	I _C	0.5	A _{dc}
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	0.8 4.57	Watt mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	- 65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	35	°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage(1) (I _C = 10 mA, I _B = 0)	V _{CEO(sus)}	300		V
Collector Cutoff Current (V _{CB} = 300 V, I _E = 0) (V _{CB} = 240 V, I _E = 0) (V _{CB} = 240 V, I _E = 0)	I _{CBO}		50 10 100	μA μA nA
Collector Cutoff Current (V _{CE} = 240 V, I _B = 0)	I _{CEO}		500	nA
Emitter Cutoff Current (V _{EB} = 3 V, I _C = 0)	I _{EBO}		100	nA

ON CHARACTERISTICS

Collector-Emitter Saturation Voltage (I _C = 1 mA, I _B = 40 μA)	V _{CE(sat)}		0.5	V
Base-Emitter Saturation Voltage (I _C = 1 mA, I _B = 10 μA)	V _{BE(sat)}		0.8	V
Common Emitter Static Value of the Forward Current Transfer Ratio (h _{21E} (1) I _C = 20 μA, V _{CE} = 0.5 V) (h _{21E} (2) I _C = 200 μA, V _{CE} = 0.5 V)	h _{FE}	25 25	200 200	

SMALL SIGNAL CHARACTERISTICS

Transition Frequency (I _C = 15 mA, V _{CB} = 10 V)	f _T	35		MHz
Collector-Base Capacitance (V _{CB} = 5 V, f = 1 MHz)	C _{obo}		25	pF

(1) Pulsed: Pulse Duration = 300 μs, Duty Cycle = 1%.