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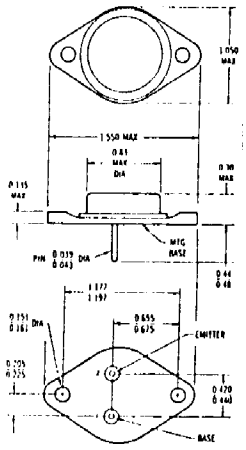
2N5633

HIGH VOLTAGE-HIGH-POWER
NPN SILICON TRANSISTORS



Collector Connected to Case

TO-3

*MAXIMUM RATINGS

Rating	Symbol	2N5633	Unit
Collector-Emitter Voltage	V_{CEO}	120	Vdc
Collector-Base Voltage	V_{CB}	120	Vdc
Emitter-Base Voltage	V_{EB}	7.0	Vdc
Collector Current – Continuous – Peak	I_C	10 15	Adc
Base Current – Continuous	I_B	5.0	Adc
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	150 0.857	Watts W/°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	θ_{JC}	1.17	°C/W

*Indicates JEDEC Registered Data.

*ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage[1] (I_C = 200 mAdc, I_B = 0)	$V_{CEO(sus)}$	120	–	Vdc
Collector-Emitter Cutoff Current (V_{CE} = 60 Vdc, I_B = 0)	I_{CEO}	–	1.0	mAdc
Collector-Emitter Cutoff Current (V_{CE} = Rated V_{CB}, $V_{EB(off)}$ = 1.5 Vdc) (V_{CE} = Rated V_{CB}, $V_{EB(off)}$ = 1.5 Vdc, T_C = 150°C)	I_{CEX}	– –	1.0 5.0	mAdc
Collector Base Cutoff Current (V_{CB} = Rated V_{CB}, I_E = 0)	I_{CBO}	–	1.0	mAdc
Emitter-Base Cutoff Current (V_{BE} = 7.0 Vdc, I_C = 0)	I_{EBO}	–	1.0	mAdc
ON CHARACTERISTICS				
DC Current Gain[1] (I_C = 5.0 Adc, V_{CE} = 2.0 Vdc) (I_C = 10 Adc, V_{CE} = 2.0 Vdc)	h_{FE}	20 5.0	80 –	–
Collector-Emitter Saturation Voltage (I_C = 7.5 Adc, I_B = 0.75 Adc) (I_C = 10 Adc, I_B = 2.0 Adc)	$V_{CE(sat)}$	– –	1.0 2.0	Vdc
Base-Emitter Saturation Voltage (I_C = 7.5 Adc, I_B = 0.75 Adc)	$V_{BE(sat)}$	–	2.0	Vdc
Base-Emitter On Voltage (I_C = 5.0 Adc, V_{CE} = 2.0 Vdc)	$V_{BE(on)}$	–	1.5	Vdc
DYNAMIC CHARACTERISTICS				
Current-Gain–Bandwidth Product (2) (I_C = 1.0 Adc, V_{CE} = 20 Vdc, f_{test} = 0.5 MHz)	f_T	1.0	–	MHz
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 0.1 MHz)	C_{ob}	–	300	pF
Small Signal Current Gain (V_{CE} = 10 Vdc, I_C = 2.0 Adc, f = 1.0 kHz)	h_{fe}	15	–	–

*Indicates JEDEC Registered Data.
(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.