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2N6233
2N6234
2N6235

HIGH VOLTAGE NPN SILICON TRANSISTORS

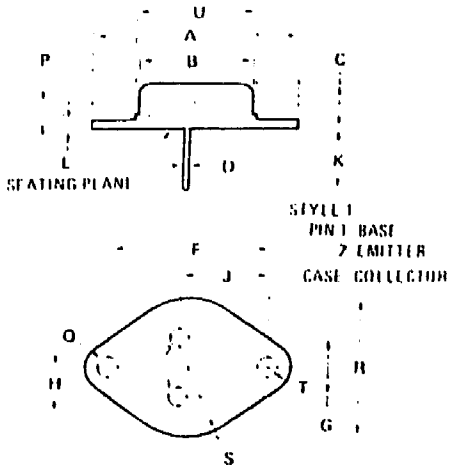
*MAXIMUM RATINGS

Rating	Symbol	2N6233	2N6234	2N6235	Unit
Collector-Emitter Voltage	V_{CEO}	225	275	325	Vdc
Collector-Base Voltage	V_{CB}	250	300	350	Vdc
Emitter-Base Voltage	V_{EB}	6.0			Vdc
Collector Current – Continuous	I_C	5.0			Adc
Peak		10			
Base Current	I_B	2.0			Adc
Total Device Dissipation @ T_C = 25°C	P_D	50			Watts
Derate above 25°C		0.286			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}	3.5	°C/W

*Indicates JEDEC Registered Data.



DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
B	11.94	12.70	0.470	0.500
C	8.35	8.64	0.250	0.340
D	0.71	0.86	0.028	0.034
E	1.27	1.91	0.050	0.075
F	24.33	24.43	0.958	0.962
G	4.83	5.33	0.190	0.210
H	2.41	2.67	0.095	0.105
J	14.48	14.99	0.570	0.590
K	9.14		0.360	
P	-	1.27	-	0.050
Q	3.61	3.86	0.142	0.152
S	-	8.89	-	0.350
T	-	3.68	-	0.145
U	-	15.75	-	0.620

All JEDEC Dimensions and and Notes Apply

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector Emitter Sustaining Voltage (1) (I_C = 20 mAdc, I_B = 0)	2N6233 2N6234 2N6235	$V_{CE(sus)}$	 225 275 325		Vdc
Collector Cutoff Current (V_{CE} = 225, I_B = 0) (V_{CE} = 275, I_B = 0) (V_{CE} = 325, I_B = 0)	2N6233 2N6234 2N6235	I_{CEO}	 	1.0 1.0 1.0	mAdc
Collector Cutoff Current (V_{CE} = 250 Vdc, $V_{EB(off)}$ = 1.5 Vdc, T_C = 150°C) (V_{CE} = 300 Vdc, $V_{EB(off)}$ = 1.5 Vdc, T_C = 150°C) (V_{CE} = 350 Vdc, $V_{EB(off)}$ = 1.5 Vdc, T_C = 150°C)	2N6233 2N6234 2N6235	I_{CEX}	 	1.0 1.0 1.0	mAdc
Collector Cutoff Current (V_{CB} = 250 Vdc, I_E = 0) (V_{CB} = 300 Vdc, I_E = 0) (V_{CB} = 350 Vdc, I_E = 0)	2N6233 2N6234 2N6235	I_{CBO}	 	0.1 0.1 0.1	mAdc
Emitter Cutoff Current (V_{BE} = 6.0 Vdc, I_C = 0)		I_{EBO}		0.1	mAdc
ON CHARACTERISTICS (1)					
DC Current Gain (I_C = 0.1 Adc, V_{CE} = 5.0 Vdc) (I_C = 1.0 Adc, V_{CE} = 5.0 Vdc) (I_C = 3.0 Adc, V_{CE} = 5.0 Vdc)		h_{FE}	 25 25 10	 125	
Collector Emitter Saturation Voltage (I_C = 1.0 Adc, I_B = 0.1 Adc) (I_C = 5.0 Adc, I_B = 1.0 Adc)		$V_{CE(sat)}$		0.5 2.5	Vdc
Base Emitter Saturation Voltage (I_C = 1.0 Adc, I_B = 0.1 Adc) (I_C = 5.0 Adc, I_B = 1.0 Adc)		$V_{BE(sat)}$		1.0 2.0	Vdc
Base Emitter On Voltage (I_C = 1.0 Adc, V_{CE} = 5.0 Vdc)		$V_{BE(on)}$		1.0	Vdc
DYNAMIC CHARACTERISTICS					
Current-Gain Bandwidth Product (2) (I_C = 0.25 Adc, V_{CE} = 10 Vdc, f_{test} = 10 MHz)		f_T	20		MHz
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, 0.1 MHz)		C_{ob}		250	pF
SWITCHING CHARACTERISTICS					
Rise Time (V_{CC} = 200 Vdc, I_C = 1.0 Adc, I_B = 0.1 Adc)		t_r		0.5	μs
Storage Time (V_{CC} = 200 Vdc, I_C = 1.0 Adc, I_{B1} = I_{B2} = 0.1 Adc)		t_s		3.5	μs
Fall Time (V_{CC} = 200 Vdc, I_C = 1.0 Adc, I_{B1} = I_{B2} = 0.1 Adc)		t_f		0.5	μs

*Indicates JEDEC Registered Data

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

(2) $|f_T| = |h_{fe}| \cdot f_{test}$