

MPS-U60

**PNP SILICON
HIGH VOLTAGE
TRANSISTOR**

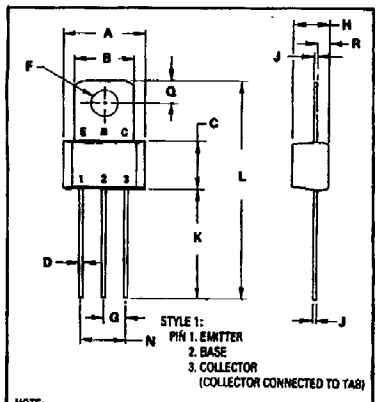


MAXIMUM RATINGS			
Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	300	Vdc
Collector-Base Voltage	V_{CB}	300	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Collector Current - Continuous	I_C	500	mAdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	10 80	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS			
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	12.5	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA(1)}$	125	°C/W

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)				
Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (2) ($I_C = 1.0 \text{ mAdc}, I_E = 0$)	$V_{(BR)CEO}$	300	-	Vdc
Collector-Base Breakdown Voltage ($I_C = 100 \mu\text{A}, I_E = 0$)	$V_{(BR)CBO}$	300	-	Vdc
Emitter-Base Breakdown Voltage ($I_E = 10 \mu\text{A}, I_C = 0$)	$V_{(BR)EBO}$	5.0	-	Vdc
Collector Cutoff Current ($V_{CE} = 200 \text{ Vdc}, I_E = 0$)	I_{CBO}	-	0.2	μA
Emitter Cutoff Current ($V_{BE} = 3.0 \text{ Vdc}, I_C = 0$)	I_{EBO}	-	0.1	μA
ON CHARACTERISTICS				
DC Current Gain (2) ($I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$) ($I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$) ($I_C = 30 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$)	h_{FE}	25 30 30	-	-
Collector-Emitter Saturation Voltage ($I_C = 20 \text{ mAdc}, I_E = 2.0 \text{ mAdc}$)	$V_{CE(sat)}$	-	0.75	Vdc
Base-Emitter Saturation Voltage ($I_C = 20 \text{ mAdc}, I_E = 2.0 \text{ mAdc}$)	$V_{BE(sat)}$	-	0.9	Vdc
DYNAMIC CHARACTERISTICS				
Current Gain - Bandwidth Product (2) ($I_C = 10 \text{ mAdc}, V_{CE} = 20 \text{ Vdc}, f = 100 \text{ MHz}$)	f_T	60	-	MHz
Collector-Base Capacitance ($V_{CB} = 20 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$)	C_{cb}	-	8.0	pF

(1) $R_{\theta JA}$ is measured with the device soldered into a typical printed circuit board.
(2) Pulse Test: Pulse Width $< 300 \mu\text{s}$, Duty Cycle $< 2.0\%$.



NOTE:
1. LEADS WITHIN 0.15 mm (0.006) TOTAL OF TRUE POSITION AT CASE, AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.14	0.53	0.005	0.021
B	0.60	0.74	0.024	0.029
C	0.41	0.66	0.016	0.026
D	0.38	0.53	0.015	0.021
F	3.18	3.33	0.125	0.131
Q	2.54 BSC		0.100 BSC	
H	3.94	4.19	0.155	0.165
J	0.38	0.41	0.015	0.016
K	11.83	12.70	0.466	0.500
L	24.14	25.52	0.950	1.009
M	4.00 BSC		0.150 BSC	
N	2.30	2.60	0.090	0.100
R	1.74	1.60	0.068	0.063



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