MPSW60

CASE 29-03, STYLE 1
TO-92 (TO-226AE)

HIGH VOLTAGE TRANSISTOR

PNP SILICON

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	300	Vdc
Collector-Base Voltage	V_{CBO}	300	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	500	mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	2.5 20	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	$R_{\theta JC}$	50	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	125	°C/W

Refer to MPSW92 for graphs.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage(1) (I_C = 1.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	300	—	Vdc
Collector-Base Breakdown Voltage (I_C = 100 μAdc, I_E = 0)	$V_{(BR)CBO}$	300	—	Vdc
Emitter-Base Breakdown Voltage (I_E = 10.0 μAdc, I_C = 0)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current (V_{CB} = 200 Vdc, I_E = 0)	I_{CBO}	—	0.2	μAdc
Emitter Cutoff Current (V_{BE} = 3.0 Vdc, I_C = 0)	I_{EBO}	—	0.1	μAdc
ON CHARACTERISTICS(1)				
DC Current Gain (I_C = 1.0 mAdc, V_{CE} = 10 Vdc) (I_C = 10 mAdc, V_{CE} = 10 Vdc) (I_C = 30 mAdc, V_{CE} = 10 Vdc)	h_{FE}	 25 30 25	 — — —	—
Collector-Emitter Saturation Voltage (I_C = 20 mAdc, I_B = 2.0 mAdc)	$V_{CE(sat)}$	—	0.75	Vdc
Base-Emitter On Voltage (I_C = 20 mAdc, V_{CE} = 10 Vdc)	$V_{BE(on)}$	—	0.9	Vdc
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (I_C = 10 mAdc, V_{CE} = 20 Vdc, f = 20 MHz)	f_T	60	—	MHz
Collector-Base Capacitance (V_{CB} = 20 Vdc, I_E = 0, f = 10 MHz)	C_{cb}	—	8.0	pF

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