

MMBPU131

**CASE 318-02/03, STYLE 14
SOT-23 (TO-236AA/AB)**

UNIUNCTION TRANSISTOR**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Power Dissipation Derate Above 25°C	P_D $R_{\theta JA}$	350 2.8	mW mW/°C
DC Gate Current	I_G	±20	mA
Repetitive Peak Forward Current 100 μ s Pulse Width, 1.0% Duty Cycle	I_{TRM}	1.0	Amp
20 μ s Pulse Width, 1.0% Duty Cycle		1.0	
Non-Repetitive Peak Forward Current 10 μ s Pulse Width	I_{TSM}	1.0	Amp
Gate to Cathode Forward Voltage	V_{GKF}	40	Volt
Gate to Cathode Reverse Voltage	V_{GKR}	5.0	Volt
Gate to Anode Reverse Voltage	V_{GAR}	40	Volt
Anode to Cathode Voltage	V_{AK}	±40	Volt

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	350 2.8	mW mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W

*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Peak-Point Current ($V_S = 10$ Vdc, $R_G = 1.0$ M Ω) ($V_S = 10$ Vdc, $R_G = 10$ k Ω)	I_P	— —	2.0 5.0	μ A
On-State Voltage ($V_S = 10$ Vdc, $R_G = 1.0$ M Ω)	V_T	0.2	1.6	Volts
Luminous Intensity ($V_S = 10$ Vdc, $R_G = 1.0$ M Ω) ($V_S = 10$ Vdc, $R_G = 10$ k Ω)	I_V	— 70	50 —	μ A
Anode to Cathode On-State Voltage ($I_F = 50$ mA Peak)	V_F	—	1.5	Volts
Output Voltage ($V_B = 20$ Vdc, $C_C = 0.2$ μ F)	V_O	6.0	—	Volts
Rise Time ($V_B = 20$ Vdc, $C_C = 0.2$ μ F)	t_r	—	80	ns