

- High forward surge capability
- Ideal for automated placement
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-277A (SMPC)



MECHANICAL DATA

Case: TO-277A (SMPC)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "M" on P/N - commercial grade

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: Indicated by cathode band

Weight: 0.095 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TSP20U60S				
Marking code		20U60				
Maximum repetitive peak reverse voltage	V _{RRM}	60				
Maximum average forward rectified current (Note 1)	I _{F(AV)}	20				
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode	I _{FSM}	300				
Maximum instantaneous forward voltage per diode (Note 2)	I _F = 10A I _F = 20A I _F = 10A	T _J = 25°C T _J = 125°C	V _F	MIN	TYP	
				-	0.400	
				-	0.460	
Maximum instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C T _J = 125°C	I _R	-	-	
				-	-	
Maximum DC reverse voltage	V _{DC}	42				
Typical thermal resistance per diode	R _{θJC}	8				
Operating temperature range	T _J	- 55 to +150				
Storage temperature range	T _{STG}	- 55 to +150				

Note1: Mounted on 30 mm x 30 mm 4 oz. pad PCB

Note2: Pulse Test with Pulse Width=300µs, 1% Duty Cycle

EXAMPLE

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DES
TSP20U60SMS1G	TSP20U60S	M	S1	G	Comr Gree

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

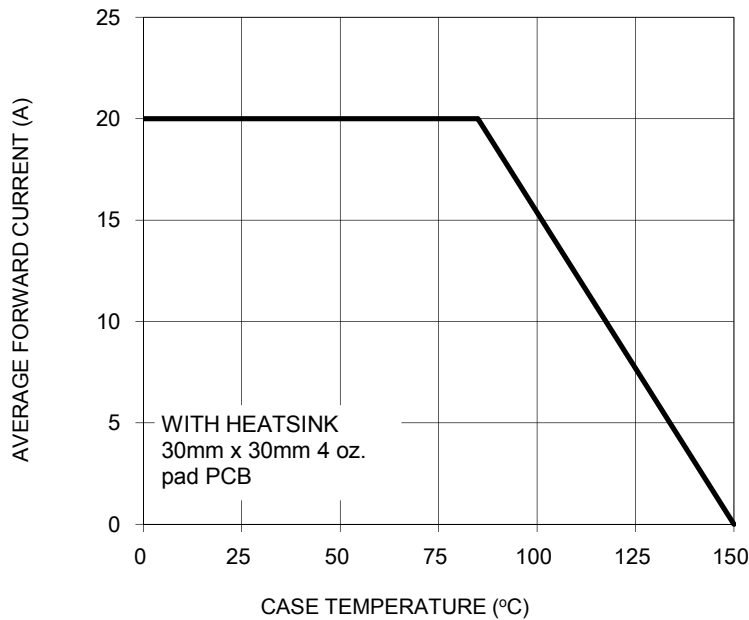


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

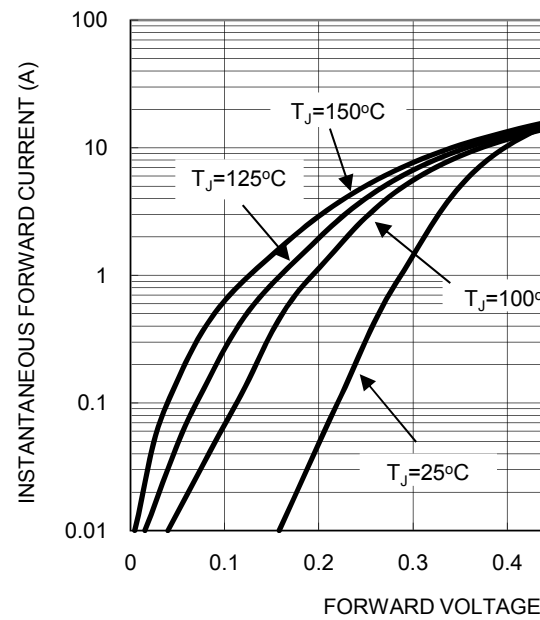


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

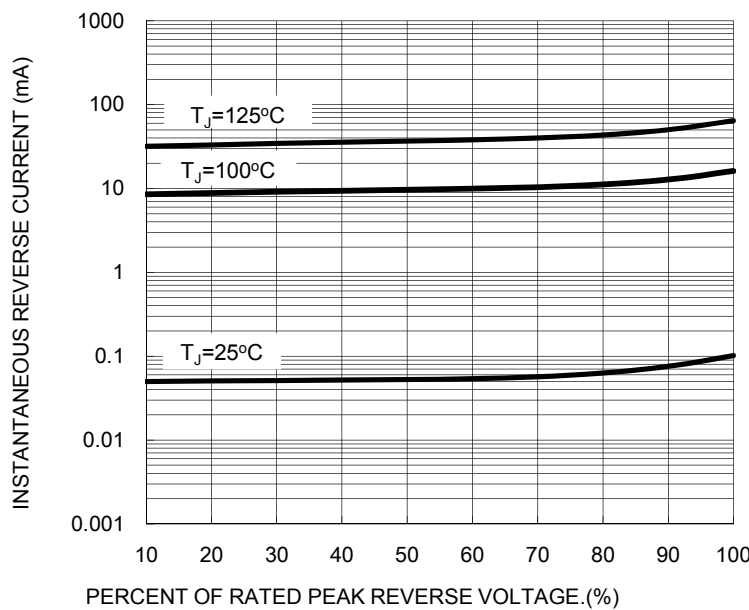
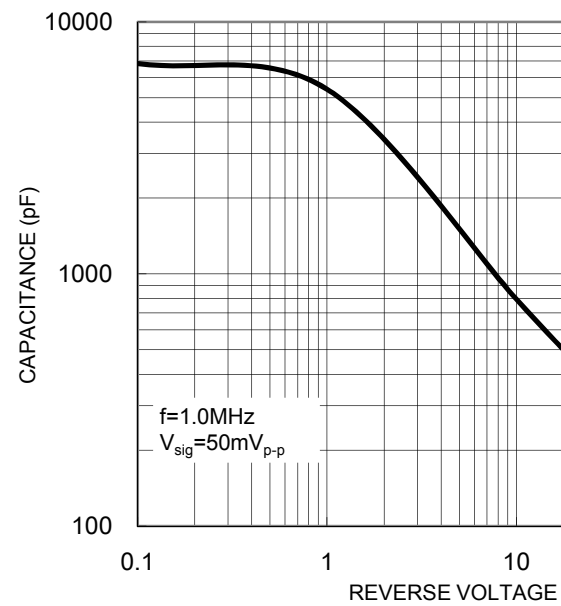
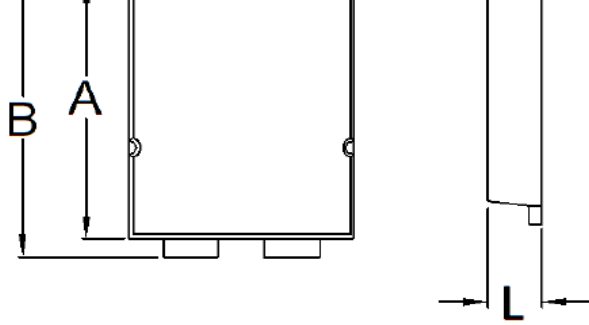
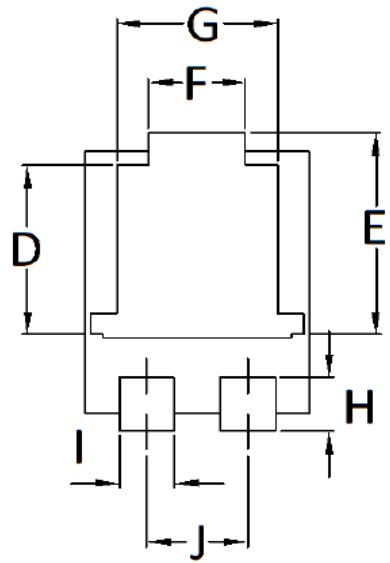


FIG. 4 TYPICAL JUNCTION CAPACITANCE

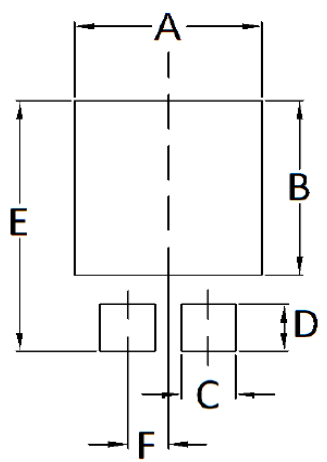




C	4.550	4.650	0.179	0.183
D	3.540	3.840	0.139	0.151
E	4.235	4.535	0.167	0.179
F	1.850	2.150	0.073	0.085
G	3.170	3.470	0.125	0.137
H	1.043	1.343	0.041	0.053
I	1.000	1.300	0.039	0.051
J	1.930	2.230	0.076	0.088
K	0.175	0.325	0.007	0.013
L	1.000	1.200	0.039	0.047



SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	4.80	0.189
B	4.72	0.186
C	1.40	0.055
D	1.27	0.050
E	6.80	0.268
F	1.04	0.041

MARKING DIAGRAM



- P/N = Marking Code
- YW = Date Code
- F = Factory Code

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