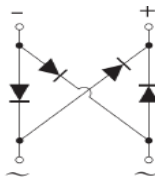


FEATURES

- Glass Passivated Chip Junction
- Reverse Voltage - 50 to 1000 V
- Forward Current - 2.0 A
- High Surge Current Capability
- Designed for Surface Mount Application

MECHANICAL DATA

- * Case: UMSB
- * Terminals: Solderable per MIL-STD-750, Method 2026



Internal Schematic

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

2.0 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25 C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	FMSB20A	FMSB20B	FMSB20D	FMSB20G	FMSB20J	FMSB20K	FMSB20M	UNIT
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	2.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	80							A
Maximum Forward Voltage Drop per Bridge Element at 2.0A.	1.3							V
Maximum DC Reverse Current $T_a=25^{\circ}\text{C}$	5.0							μA
at Rated DC Blocking Voltage $T_a=100^{\circ}\text{C}$	200							μA
Maximum Reverse Recovery Time (Note 1)	500							TRR
Typical Junction Capacitance (Note 2)	40							pF
Typical Thermal Resistance R _{JA} (Note 3)	30							$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range T _J , T _{STG}	-65 — +150							$^{\circ}\text{C}$

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance from Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

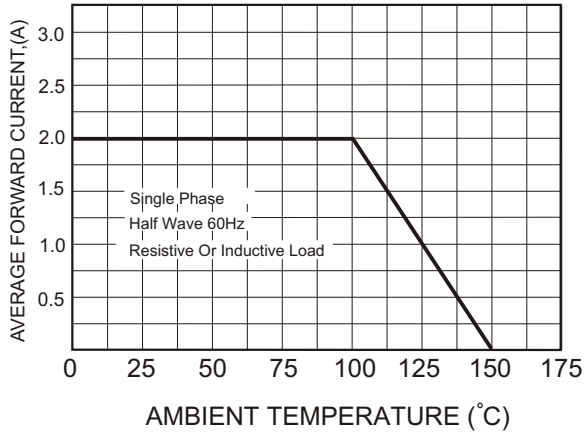


FIG.2-TYPICAL FORWARD CHARACTERISTICS

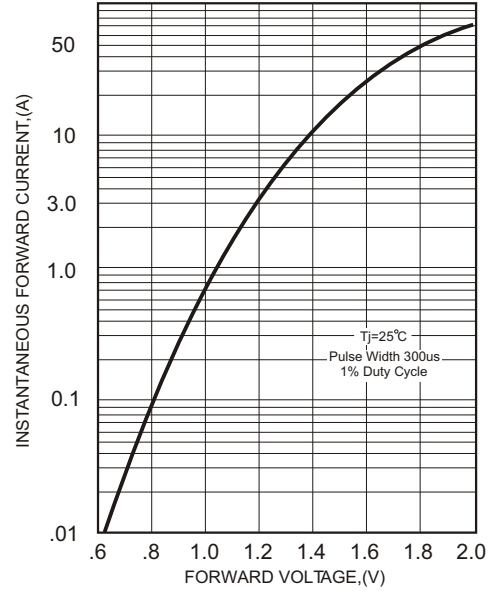


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

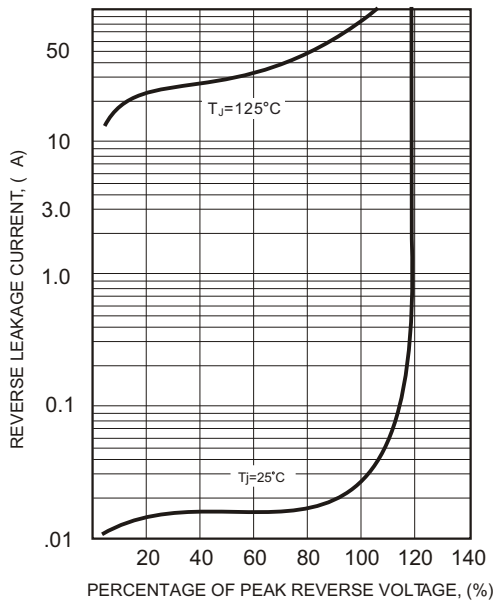


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

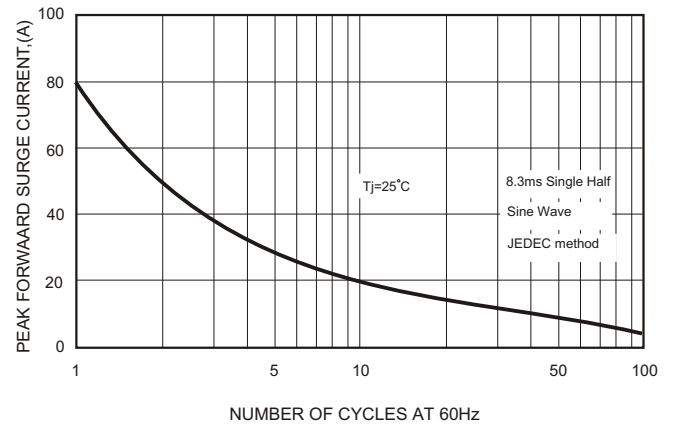
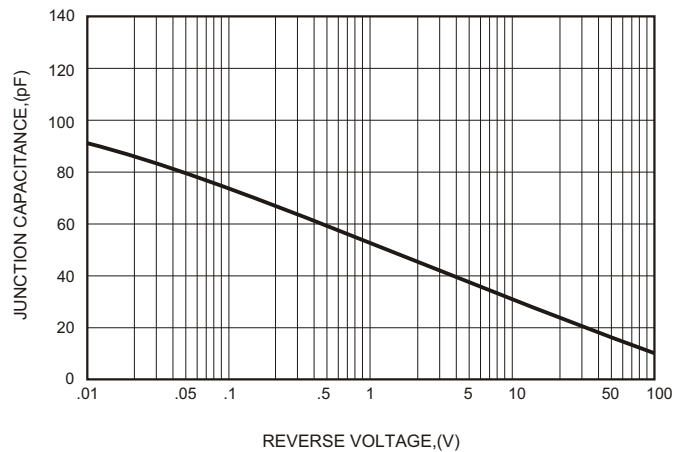


FIG.5-TYPICAL JUNCTION CAPACITANCE



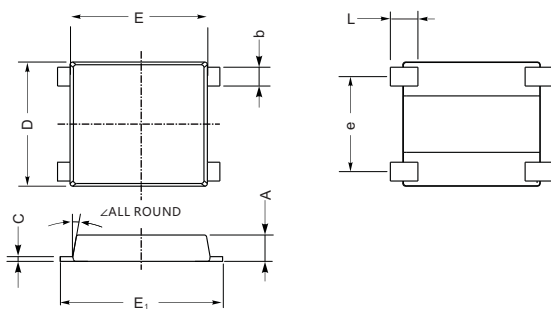
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max ($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217 °C
	-Temperature (t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C

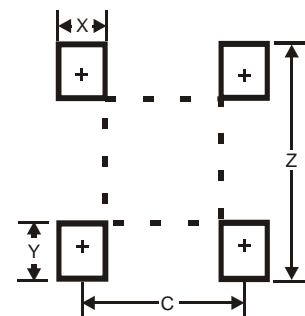


Package Dimensions & Suggested Pad Layout

UMSB



UNIT		A	C	D	E	E ₁	L	e	b	z
mm	max	1.5	0.29	7.0	7.6	8.9	1.6	5.3	1.15	10°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	
mil	max	59	12	276	299	350	55	209	45	
	min	51	7	244	280	331	31.5	193	37	



Dimensions	
Z	9.4
X	1.8
Y	2.1
C	5.1

Tape & reel specification

Tape		Symbol	Dimension (mm)		
		P0	4.00±0.20		
		P1	12.00±0.20		
		P2	2.00±0.20		
		D0	1.60±0.15		
		D1	1.60±0.15		
		E	1.75±0.20		
		F	7.50±0.15		
		W	16.00±0.20		
		A0	7.00±0.25		
		B0	9.30±0.25		
		K0	1.80±0.25		
		T	0.25±0.10		
		13" Reel		D2	330.0±5.0
				D3	73Min.
D4	16.0±2.5				
W1	21.0±3.0				
		Quantity: 3000PCS			