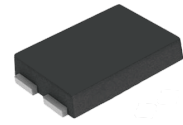
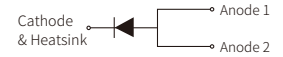


FEATURES

- | Low profile package
- | Ideal for automated placement
- | Glass passivated chip junction
- | High forward surge capability
- | Meet AEC-Q101 Requirements



TO-277B



Schematic Symbol

MECHANICAL DATA

- | Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- | Polarity: Cathode line denotes the cathode end

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	S10AQ	S10BQ	S10DQ	S10GQ	S10JQ	S10KQ	S10MQ	Unit
Marking		S10AQ	S10BQ	S10DQ	S10GQ	S10JQ	S10KQ	S10MQ	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I _o	10							A
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	200							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C		400							
Maximum instantaneous forward voltage I _{FM} =10A	V _F	1.1							V
Maximum DC reverse current at rated DC blocking voltage	I _R	T _j =25°C							μA
		T _j =125°C							
Current squared time @1ms ≤ t ≤ 8.3ms T _j =25°C	I ² t	166							A ² S
Typical junction capacitance	C _J	55							pF
Typical Thermal resistance	R _{θJ-A(1)}	50							°C/W
	R _{θJ-L(1)}	10							
	R _{θJ-C(1)}	8							
Junction Temperature	T _j	-55 to +150							°C
Storage Temperature	T _{STG}	-55 to +150							°C

CHARACTERISTIC CURVES

Fig. 1- I_o-T_L Curve

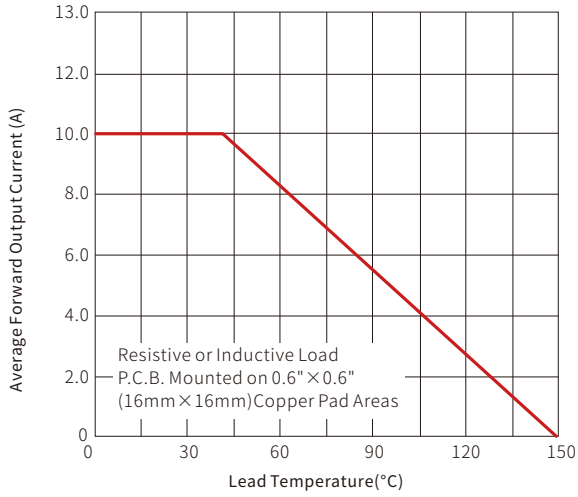


Fig. 2-Forward Surge Current Capability

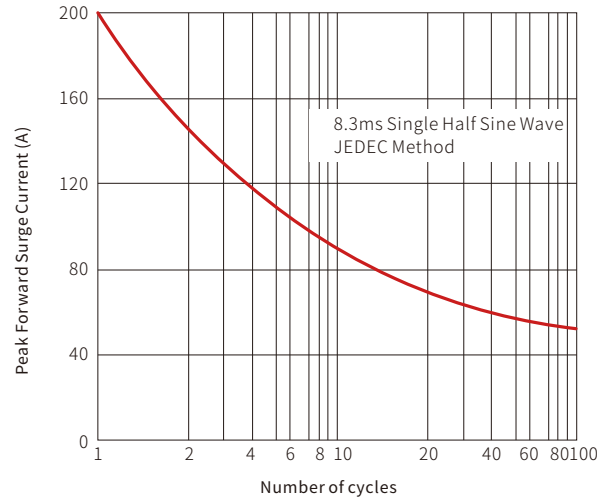


Fig. 3-Typical Forward Voltage

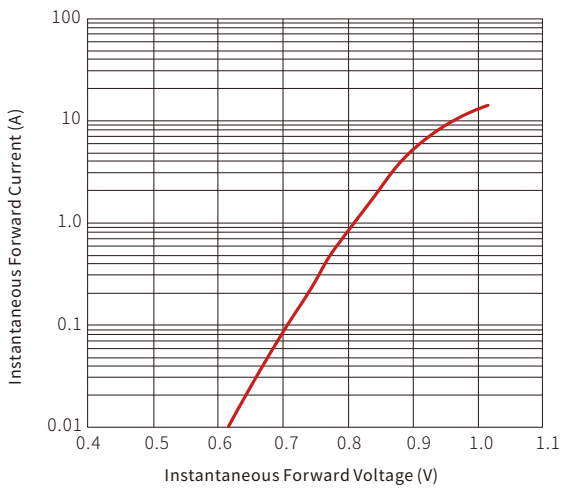
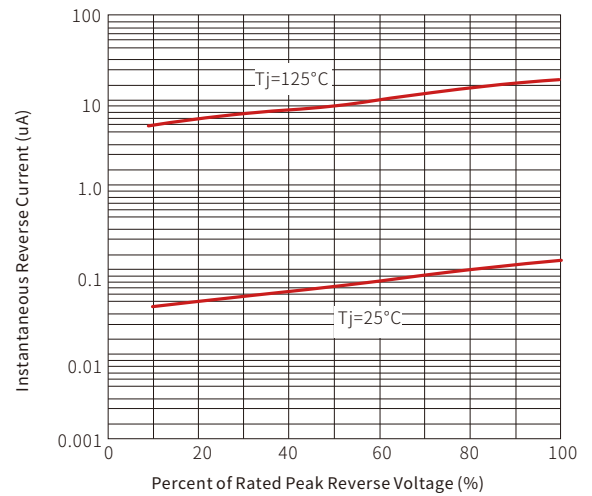
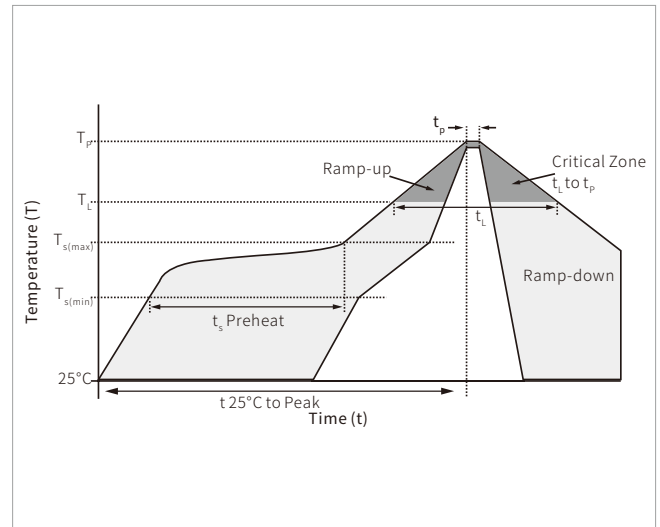


Fig. 4-Typical Reverse Characteristics

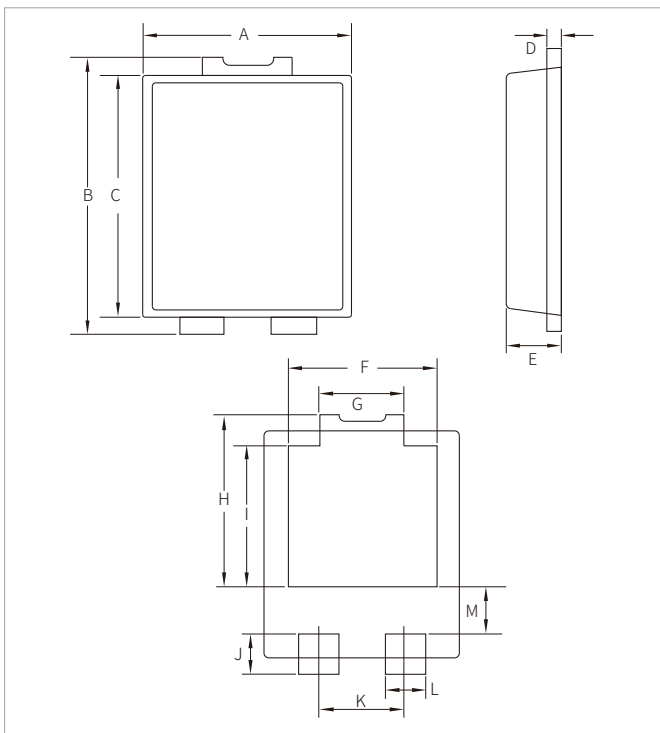


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

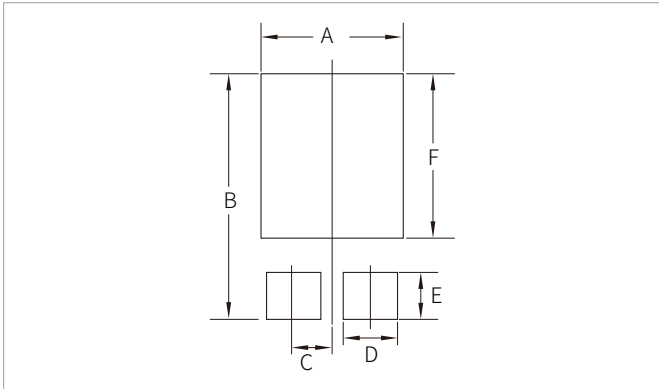


TO-277B PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.60	0.157	0.181
B	6.20	6.80	0.244	0.268
C	5.50	6.00	0.216	0.236
D	0.25	0.40	0.010	0.016
E	1.05	1.35	0.041	0.053
F	3.00	3.50	0.118	0.138
G	1.70	2.00	0.067	0.079
H	4.20	4.50	0.165	0.177
I	3.52Nom		0.139Nom	
J	0.85	1.10	0.033	0.043
K	1.86Nom		0.073Nom	
L	0.80	1.00	0.031	0.039
M	1.10	1.40	0.043	0.055

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.40	-	0.134	-
B	6.90		0.272	
C	0.95		0.037	
D	1.30	-	0.051	-
E	1.30	-	0.051	-
F	4.60	-	0.181	-

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
S10AQ-S10MQ	TO-277B	5000PCS	13"

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By QR Code

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