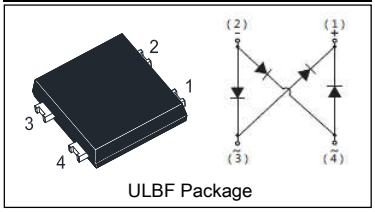
TD6MF610

Surface Mount Bridge Rectifier
Reverse Voltage - 1000 V
Forward Current - 6 A

Pinning

PIN	Descriptin
1	Output Anode (+)
2	Output Cathode (-)
3	Input pin (~)
4	Input pin (~)



ULBF Package

Features

- Fast reverse recovery time
- Designed for surface mount application

Mechanical Data

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

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Average Rectified Forward Current at T_C = 100℃	$I_{F(AV)}$	6	A
Peak Forward Surge Current 8.3 ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200	A
Rating for Fusing	I^2t	166	A^2S
Typical Thermal Resistance from Junction to Lead [1)]	$R_{\theta JL}$	14	℃/W
Typical Thermal Resistance from Junction to Case [1)]	$R_{\theta JC}$	6	℃/W
Typical Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	60	℃/W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	℃

[1)] Mounted on glass epoxy PC board with 4 × 1.5" × 1.5"（3.81 × 3.81 cm）copper pad.

Characteristics at T_a = 25℃

Parameter		Symbol	Typ.	Max.	Unit
Forward Voltage at I_F = 6 A		V_F	-	1.1	V
Reverse Current at Rated DC Blocking Voltage	T_j = 25°C T_j = 125°C	I_R	- -	5 200	μA
Reverse Recovery Time at I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A		t_{rr}	-	500	ns
Junction Capacitance at V_R = 4 V DC, f = 1 MHz		C_j	100	-	pF

Dated: 25/06/2021 JD Rev: 01

Electrical Characteristics Curves

Fig.1 Average Rectified Output Current Derating Curve

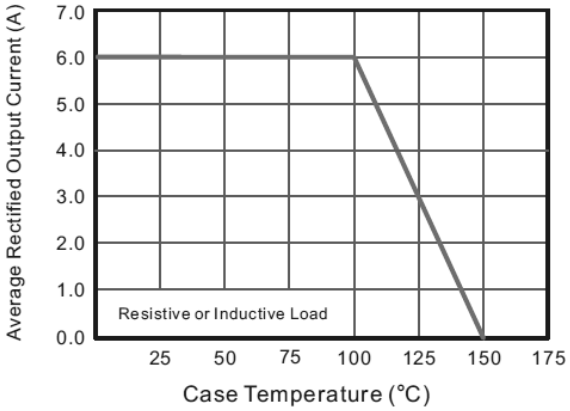


Fig.2 Typical Reverse Characteristics

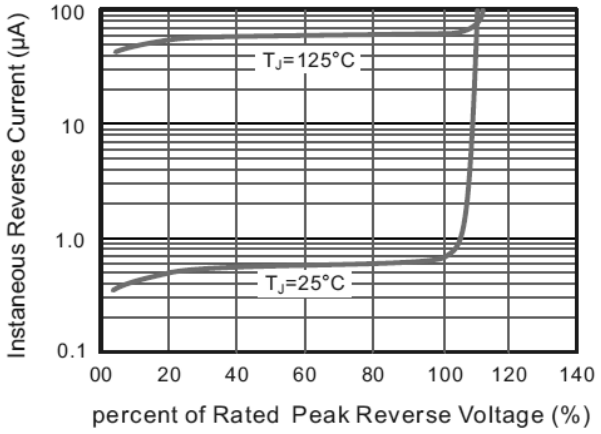


Fig.3 Typical Instaneous Forward Characteristics

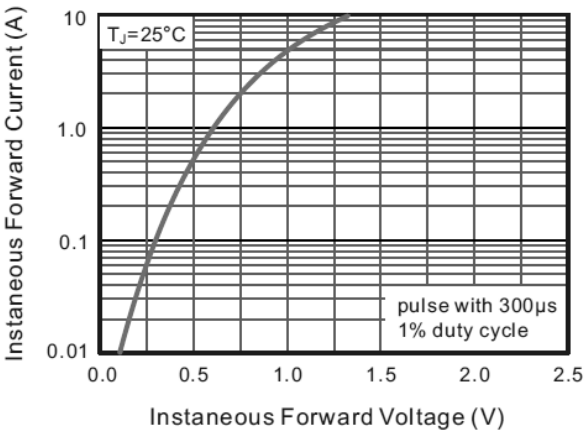


Fig.4 Typical Junction Capacitance

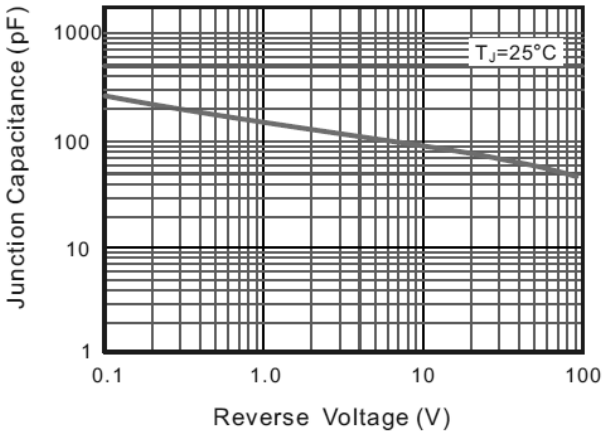


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

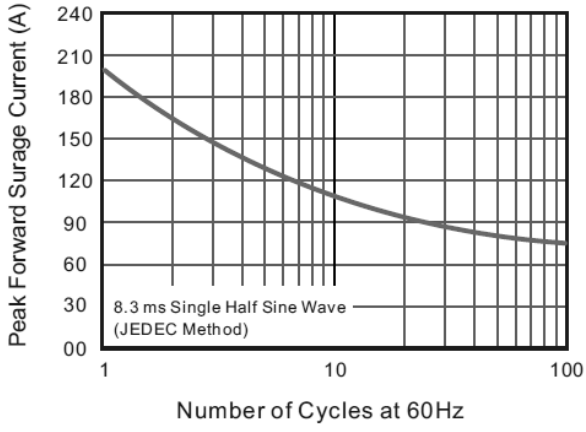
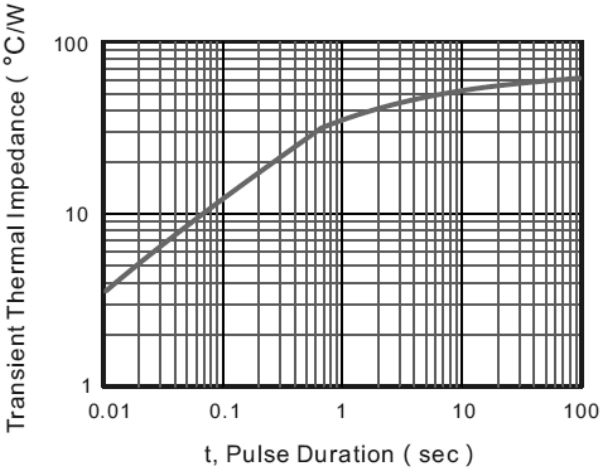
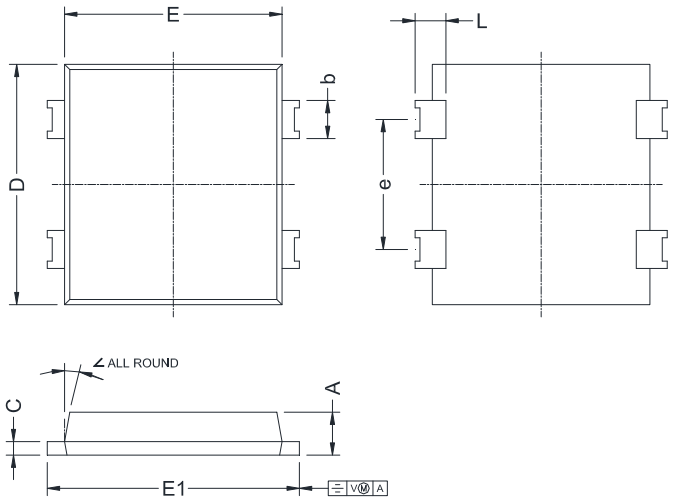


Fig.6- Typical Transient Thermal Impedance

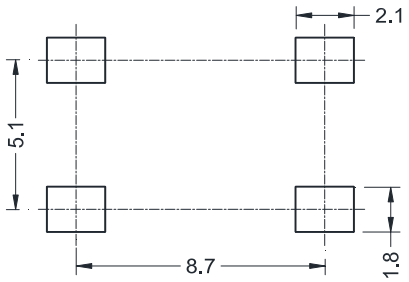


Package Outline Dimensions (Units: mm) ULBF



UNIT	A	C	D	E	E1	L	e	b	∠
mm	1.75	0.55	9.8	8.8	10.2	1.25	5.3	1.55	10º
	1.35	0.25	9.4	8.4	9.8	0.85	4.9	1.25	

Recommended Soldering Footprint



Marking information

" ULBR610 " = Part No.
" YYWW " = Date Code Marking
" Y " = Year (ex: 19 = 2019)
" W " = Week (ex: 09 = the 9th week of the year)
Font type: Arial