

TL05F~TL10F

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- Low Leakage Current
- High Forward Surge Capability
- Designed for Surface Mount Application
- Plastic Material - UL Flammability 94V -O



Mechanical Date

- **Case:** TLM-S Molded Plastic
- **Terminals:** Solder plated, Solderable per J-STD-002B and JESD22-B102D
- **Polarity:** As Marked on body
- **Marking:** Type Number
- **Lead Free:** For ROHS/Leadfree Version

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A
V_{RRM}	50 V to 1000 V
I_{FSM}	20 A
I_R	5 μ A
V_F	1.1 V
$T_j \text{ max.}$	150 °C

Maximum Ratings & Thermal Characteristics ($T_A = 25\text{ °C}$ unless otherwise noted)

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Items	Symbol	TL05F	TL1F	TL2F	TL4F	TL6F	TL8F	TL10F	UNIT
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	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	0.5 ¹⁾							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	20							A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

1): Mounted on glass epoxy P.C.B with 1.2×0.8mm² pads.

2): Mounted on aluminum substrate P.C.B with 1.2×0.8mm² pads.

Electrical Characteristics ($T_A = 25\text{ °C}$ unless otherwise noted)

Items	Test conditions	Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage	$I_F = 0.5A$ ³⁾	V_F	-	0.95	1.1	V
Reverse current	$T_A = 25\text{ °C}$	I_R	-	-	5	μ A
	$T_A = 125\text{ °C}$		-	-	100	

3): Pulse test: 300 μ S pulse width, 1% duty cycle.

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

Fig.1 Forward Current Derating Curve

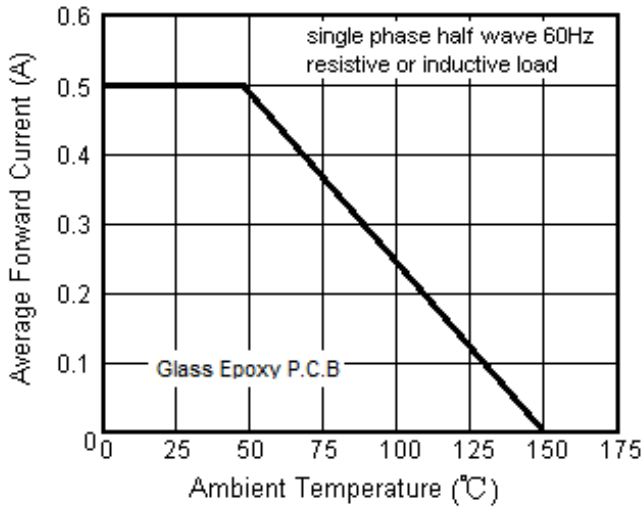


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

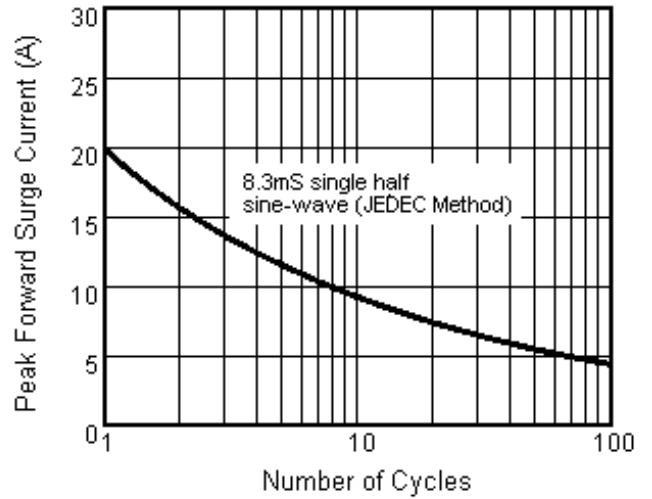


Fig.3 Typical Instantaneous Forward Characteristics

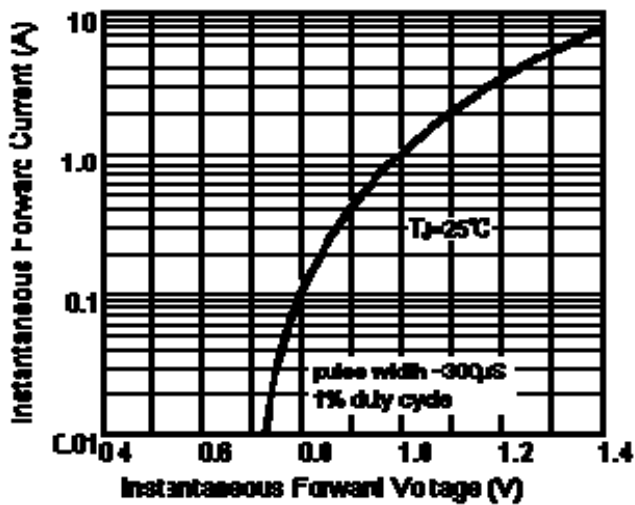
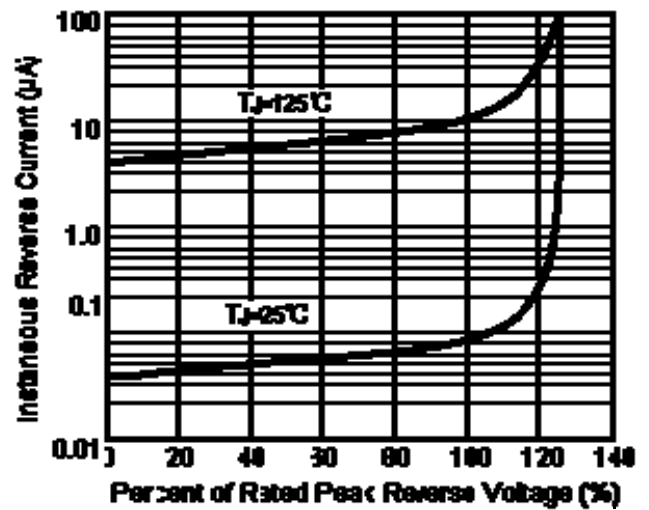
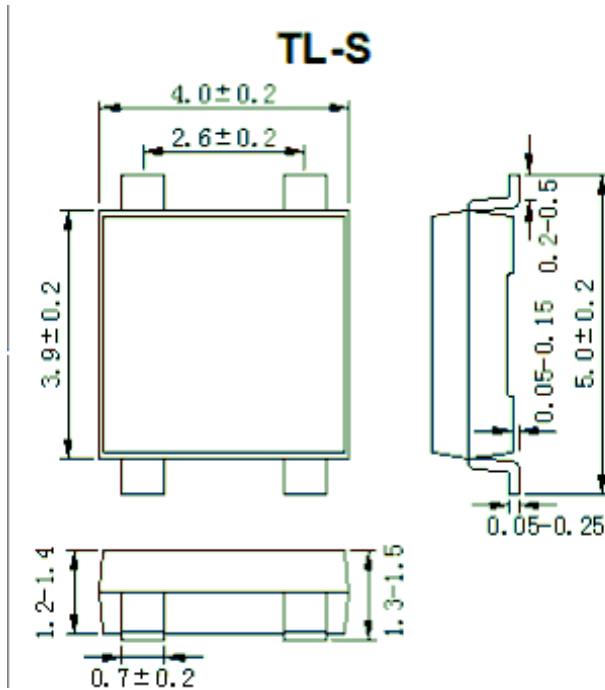


Fig.4 Typical Reverse Characteristics



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Package Outline



Soldering Pad

