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台舟电子

TPRS2AF~TPRS2MF
Fast Recovery Rectifiers

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Features

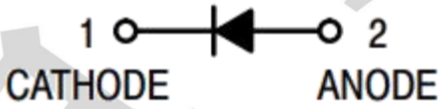
- For surface mounted applications
- Low profile package
- Reverse Voltage - 50 to 1000 V
- Forward Current - 2 A
- RoHs Product

Applications

- Freewheeling diodes
- Polarity protection application
- DC-DC converters
- High frequency rectifier of switching mode power supplies



SMAF



Absolute Maximum Ratings and Electrical characteristics

Ratings at ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter		Symbols	TPRS 2AF	TPRS 2BF	TPRS 2DF	TPRS 2GF	TPRS 2JF	TPRS 2KF	TPRS 2MF	Units
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 at T_c = 125 °C		$I_{F(AV)}$	2.0							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	50							A
Max Instantaneous Forward Voltage at 2 A		V_F	1.3							V
Maximum DC Reverse Current at Rated DC Reverse Voltage	T_a = 25°C	I_R	5.0							uA
	T =100°C		100							
Typical Junction Capacitance	at V_R=4V, f=1MHz	C_j	22							PF
Maximum Reverse Recovery Time (1)		trr	150				250	500		nS
Typical Thermal Resistance (2)		$R_{\theta JA}$	65							°C/W
		$R_{\theta JC}$	20							°C/W
Operating Junction Temperature Range		T_j	-55 ~ +150							°C
Storage Temperature Range		T_{stg}	-55 ~ +150							°C

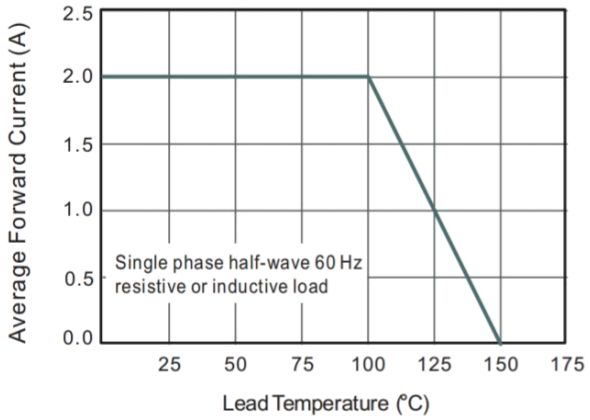
1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

2) Measured at 1MHz and applied reverse voltage of 4V D.C

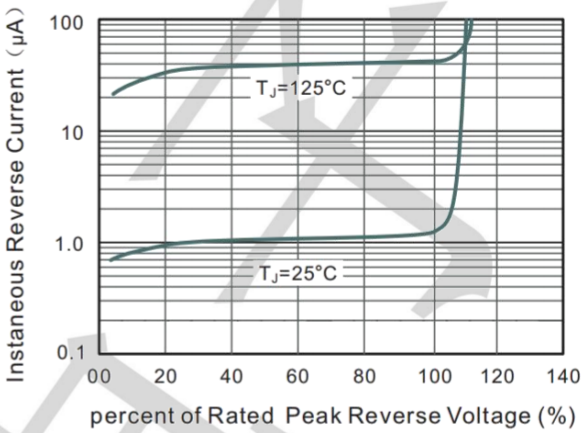
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Typical Electrical Characteristic Curves

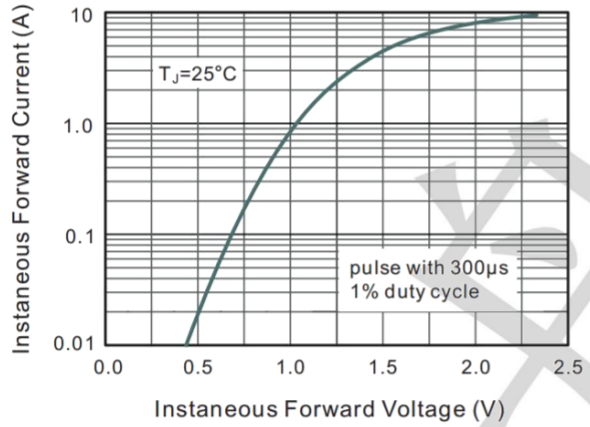
Forward Current Derating Curve



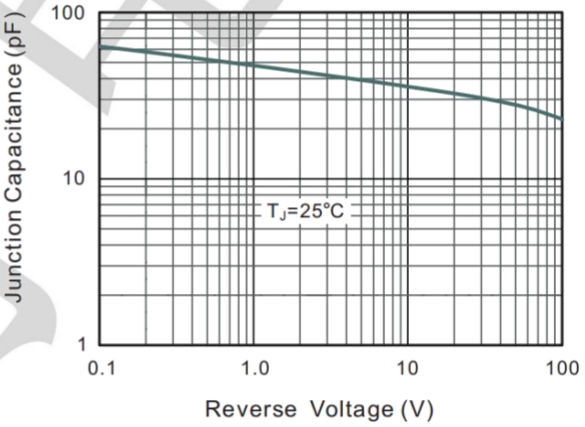
Typical Reverse Characteristics



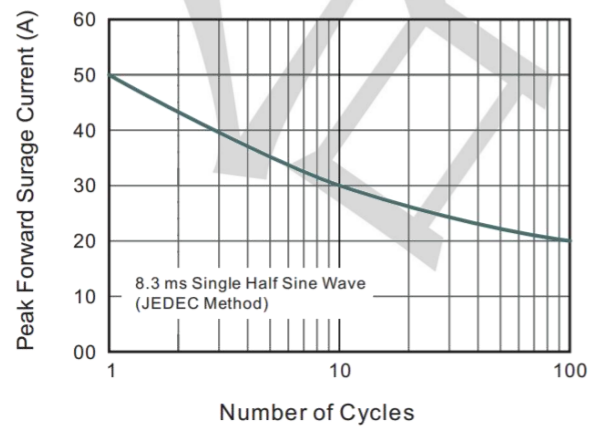
Typical Instaneous Forward Characteristics



Typical Junction Capacitance



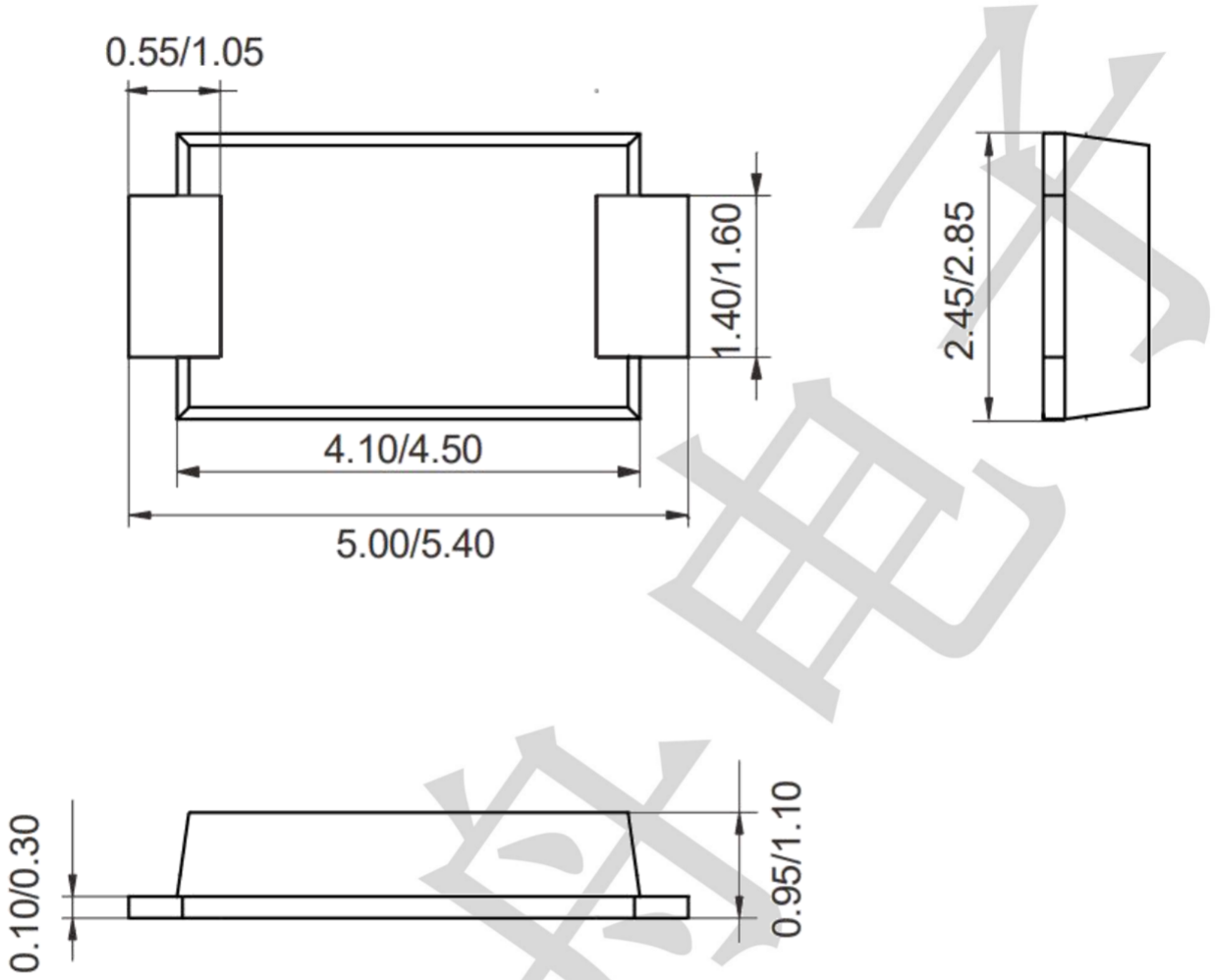
Maximum Non-Repetitive Peak Forward Surage Current



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Package Outline Dimensions (unit: mm)

SMAF



Mounting Pad Layout (unit: mm)

