TECH PUBLIC
台舟电子

TPRES5BB thru TPRES5JB

5.0 Ampere Surface Mount Type Super Fast Recovery Rectifier Diodes

www.sot23.com.tw

FEATURE

- Glass passivated chip junction
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250℃/10 seconds at terminals

MECHANICAL DATA

Case:SMB/DO-214AA Package
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode band
Mounting Position: Any
Weight: 0.11 gram approximately

APPLICATION

- LED SMPS/Industrial power supply
- HID ballast stabilizer
- Telecommunication SMPS/LED street lamp





SMB

PIN	DESCRIPTION
1	Cathode
2	Anode

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

	SYMBOLS	TPRES5BB	TPRES5CB	TPRES5DB	TPRES5EB	TPRES5GB	TPRES5JB	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	V_{RMS}	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	V_{DC}	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current at T_L=75℃	$I_{(AV)}$	5.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125						Amps
Maximum instantaneous forward voltage at 5.0A	V_F	0.95			1.3	1.7		Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	10.0 300.0						μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35						ns
Typical junction capacitance (NOTE 2)	C_J	58.0						pF
Typical thermal resistance	$R_{\theta JA}$	47.0						°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +150						℃

Note:1.Reverse recovery condition I_F=0.5A,I_R=1.0A,I_{rr}=0.25A

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Typical Electrical Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

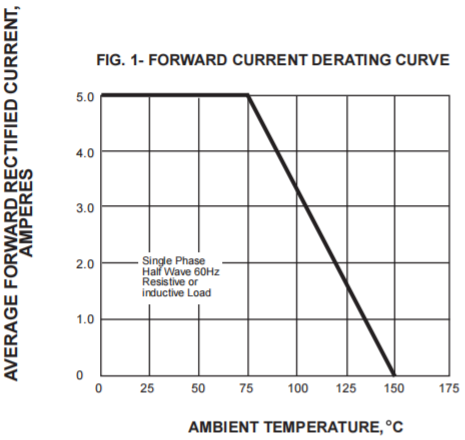


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

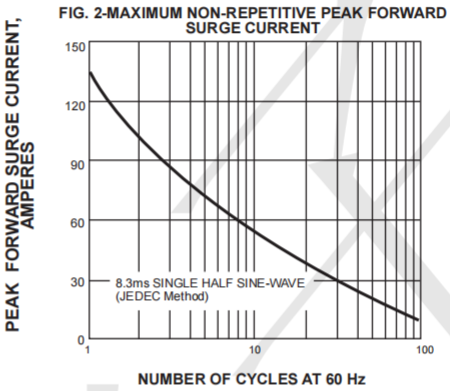


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

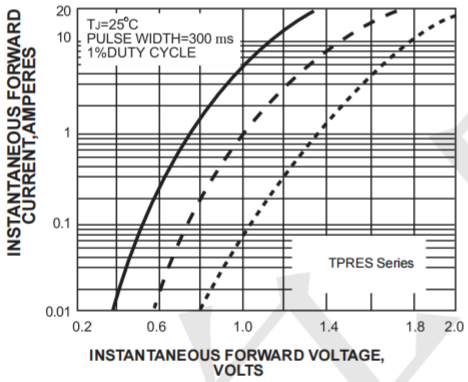


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

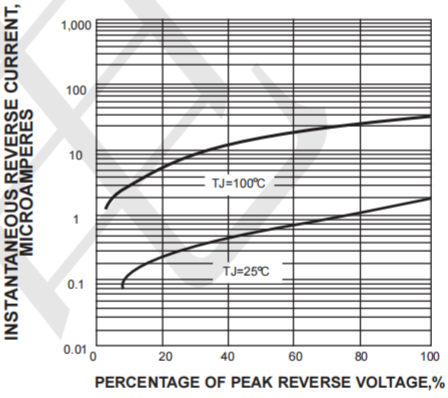


FIG. 5-TYPICAL JUNCTION CAPACITANCE

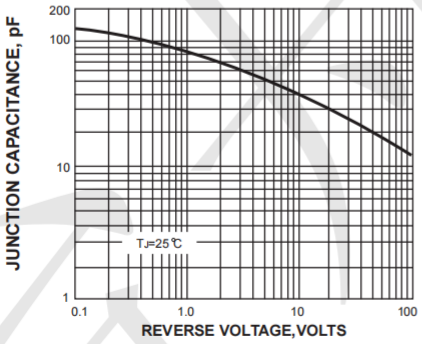
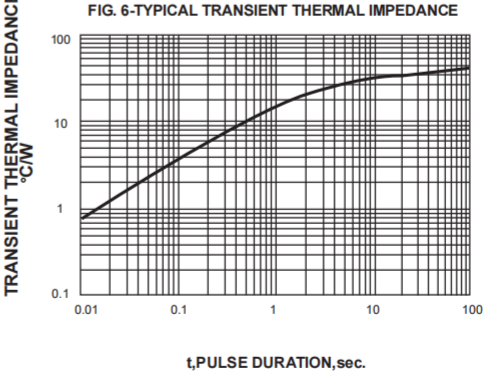
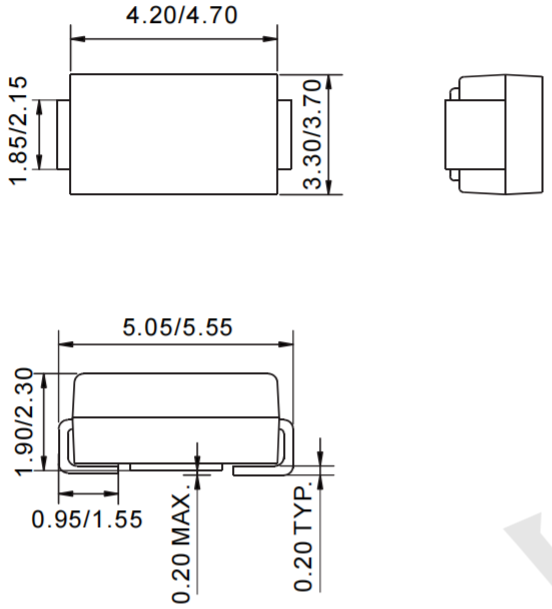


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Outline Drawing - SMB(DO-214AA) (Unit: mm)



Mounting Pad Layout-SMB(DO-214AA) (Unit: mm)

