

Pb Free Plating Product

ES5AB thru ES5JB



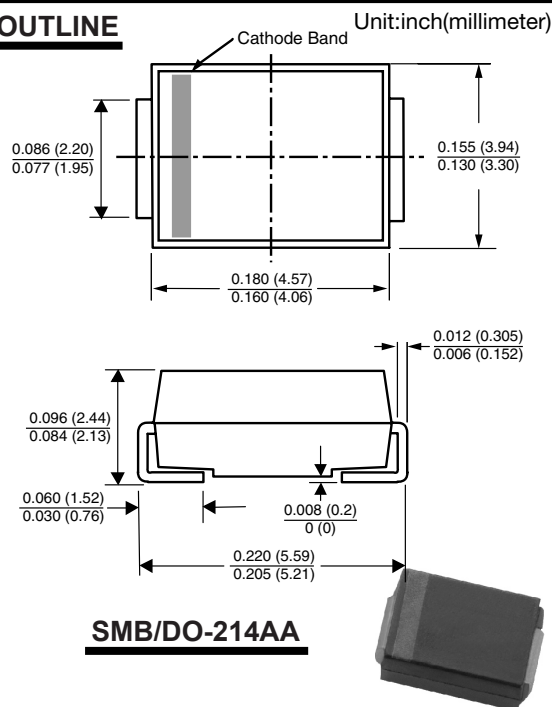
5.0 Ampere Surface Mount Type Super Fast Recovery Rectifier Diodes

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°C/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

OUTLINE**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current at T _L =75°C	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°C at rated DC blocking voltage T _A =100°C	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 _{θJA}	47.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150							°C

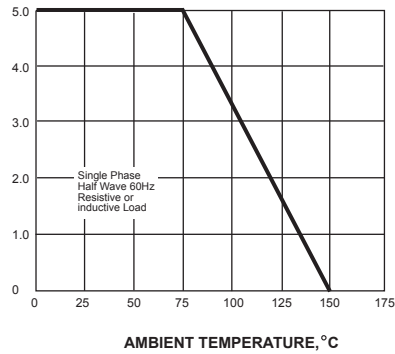
Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

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

RATINGS AND CHARACTERISTIC CURVES ES5AB thru ES5JB

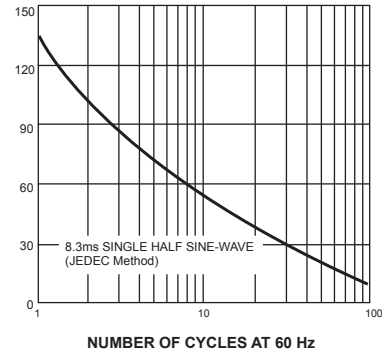
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



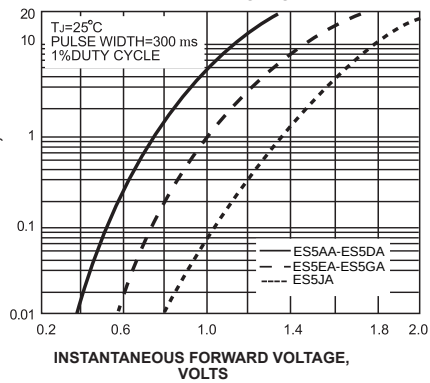
PEAK FORWARD SURGE CURRENT,
AMPERES

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



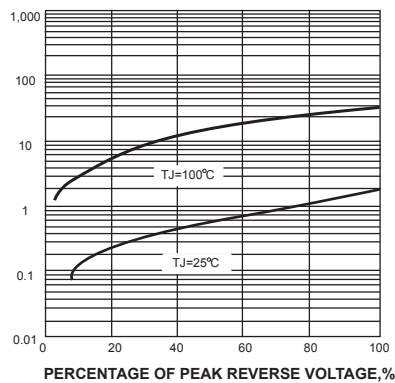
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



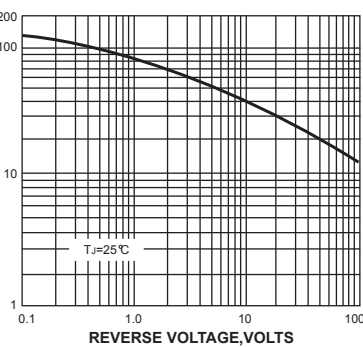
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

