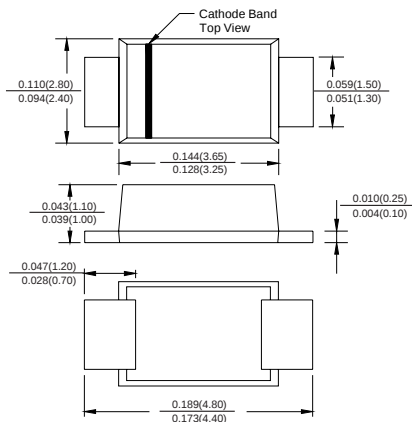


ES1AAS THRU ES1JAS

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

SMAS



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Super fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at terminals
- ◆ Glass passivated chip junction

MECHANICAL DATA

Case: JEDEC SMAS molded plastic body over passivated chip

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0011 ounce, 0.029 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

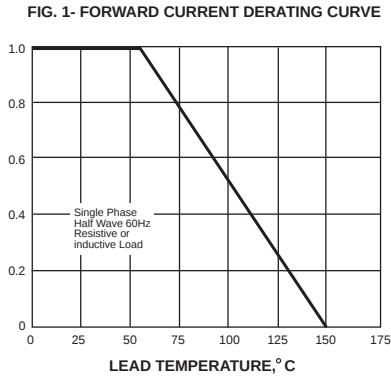
Single phase half wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	ES1AAS	ES1BAS	ES1CAS	ES1DAS	ES1EAS	ES1GAS	ES1JAS	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 =55°C	I _(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.95				1.25		1.7	Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	35							ns
Typical junction capacitance (NOTE 2)	C _J	15.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA}	95.0							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-55 to +150							°C

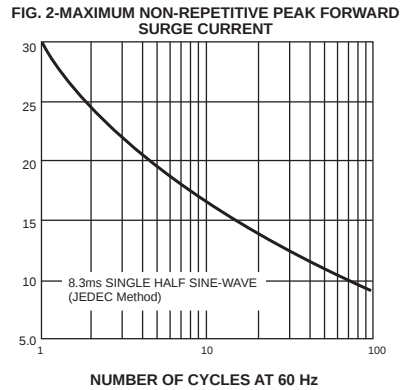
Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES ES1AAS THRU ES1JAS

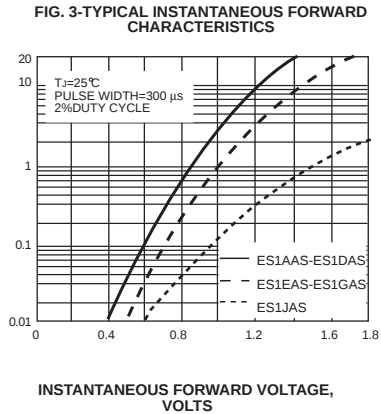
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES



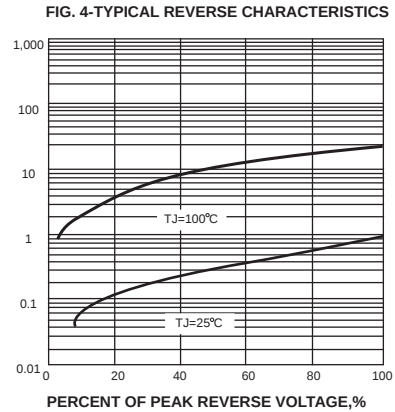
PEAK FORWARD SURGE CURRENT,
AMPERES



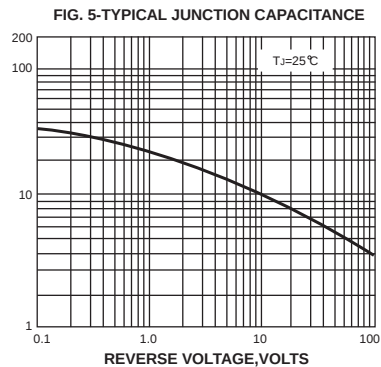
INSTANTANEOUS FORWARD
CURRENT,AMPERES



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE,
 $^{\circ}\text{C}/\text{W}$

