

### ES3A THRU ES3K

**VOLTAGE RANGE** 50 to 800 Volts  
**CURRENT** 3.0 Ampere

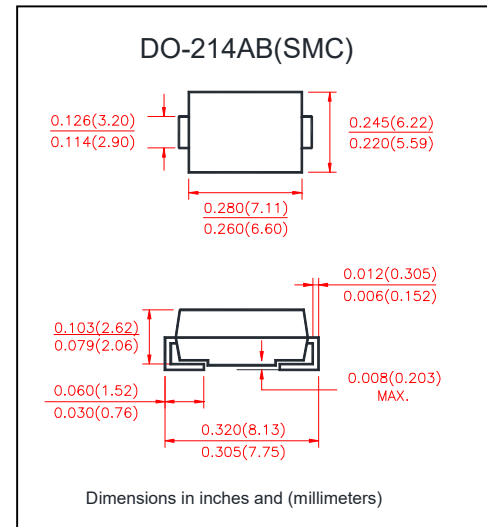
#### FEATURES

- Plastic package has underwrites laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Built-in strain relief,
- Suoer Fast switching speed for high efficiency
- High temperature soldering guaranteed: 260°C/10 seconds

#### MECHANICAL DATA

Case: JEDED DO-214AB transfer molded plastic

- Terminals: Solder plated, solderable per MIL-STD-750
- Method 2026
- Polarity: Color band denotes cathode end



#### 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 derate current by 20%.

	SYMBOLS	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	ES3K	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	800	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	560	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	800	Volts
Maximum Average Forward Rectified Current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100								Amps
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	0.95				1.25		1.7		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$I_R$	$T_A = 25^\circ\text{C}$								$\mu\text{A}$
		$T_A = 125^\circ\text{C}$								
Typical Reverse Recovery Time Test conditions $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{RR}=0.25\text{A}$	$t_{rr}$	35								nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	45				30				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	55								$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	17								
Operating Junction Temperature Range	$T_J$	(-55 to +150)								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)								$^\circ\text{C}$

#### Notes:

1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.3"×0.3"(8.0mm × 8.0mm) copper pad areas.



# WEET Technology Company Limited

## Ultra-Fast Recovery Rectifiers

ES3A THRU ES3K

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CURRENT

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### RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

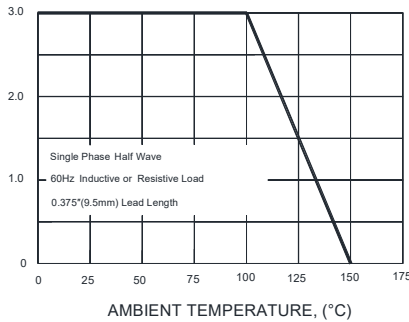


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

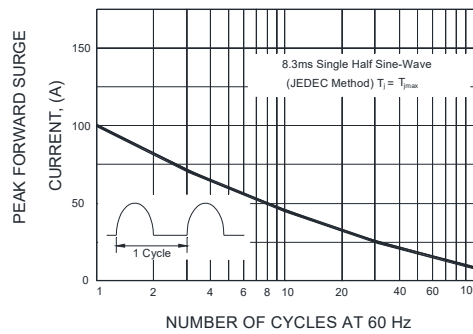


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

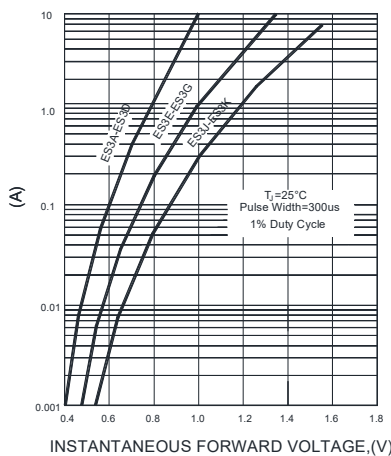


FIG.4-TYPICAL REVERSE CHARACTERISTICS

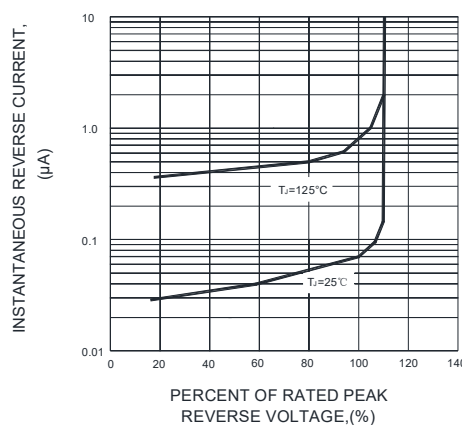


FIG.5-TYPICAL JUNCTION CAPACITANCE

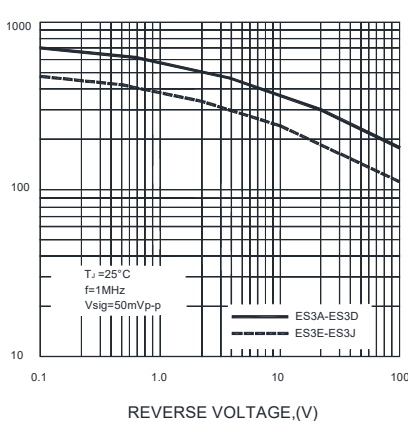
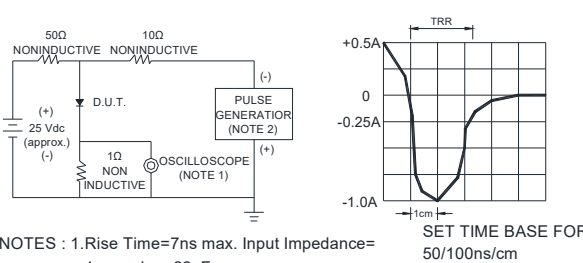


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1. Rise Time=7ns max. Input Impedance= 1 megohm. 22pF  
2. Rise time=10ns max. Source Impedance= 50 ohms

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.