



TVS

Rectifiers

SKY

Zener

Switching

DIAC

Bridge



DO-214AC (SMA)

FEATURES

- Fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- Glass passivated chip junction

PRIMARY CHARACTERISTICS

IF(AV)	1.0 A
VRRM	50 V to 1000 V
IFSM	30 A
Trr	150 ns, 250 ns, 500 ns
VF	1.3V
IR	5.0 μA
TJ max.	150 °C

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body over passivated chip

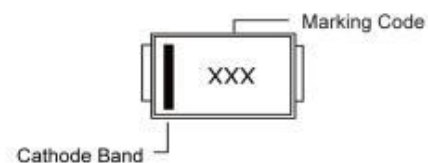
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.064 grams

Part Marking System



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%.

PARAMETER	SYMBOL	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	FR1M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at TA=90 °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	1.3							Volts
Maximum DC reverse current TA=25 °C at rated DC blocking voltage TA=100 °C	I_R	5.0 50.0							μA
Maximum reverse recovery time (NOTE 1)	T_{rr}	150			250		500		nS
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							°C

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

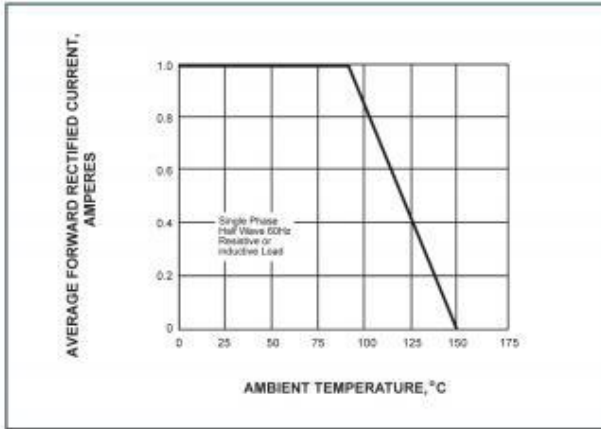


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

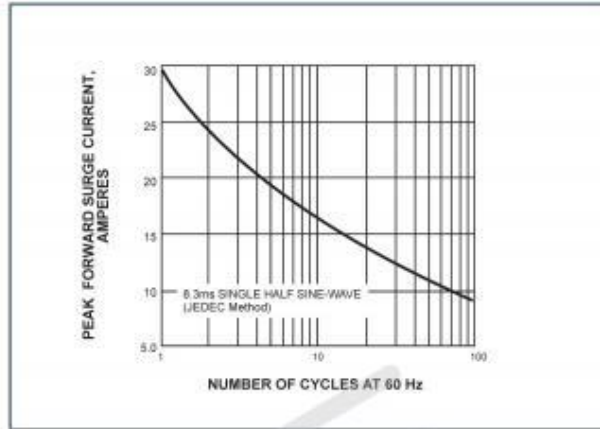


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

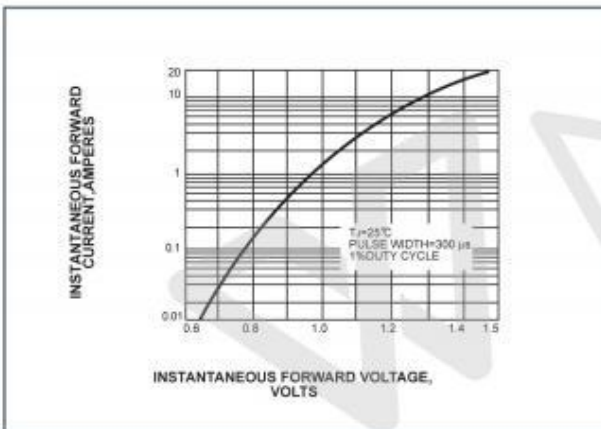
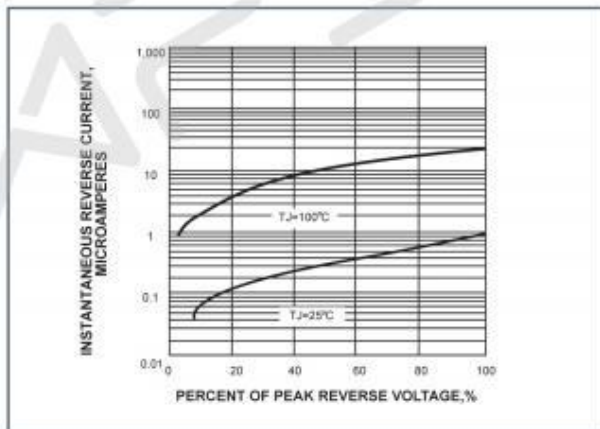
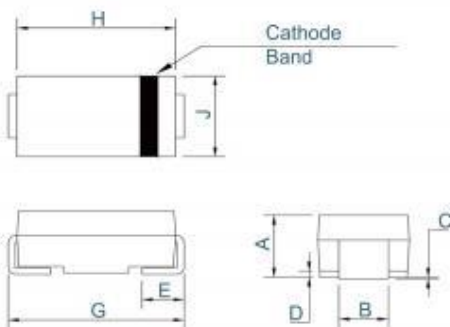


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Dimensions

SMA-(DO-214AC)



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.067	0.091	1.70	2.31	
B	0.051	0.067	1.29	1.70	
C	0.002	0.008	0.05	0.20	
D	—	0.020	—	0.51	
E	0.030	0.060	0.76	1.52	
G	0.185	0.209	4.70	5.31	
H	0.157	0.181	4.00	4.60	
J	0.086	0.110	2.18	2.79	

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